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ABSTRACT

This report presents a wide variety of findings about what teachers think and believe about the practices, people, and issues in U.S. schools. It is the second of three volumes, the first of which is a handbook for educational practitioners. The third volume is a bibliography for the first two volumes. This report contains 10 chapters, each of which reviews research for the following topics: a) the nature of attitudes and attitude measurement; b) teacher attitudes toward specific curriculum areas; c) teacher attitudes toward minority populations; d) student attributes and how they become the bases of discriminatory teacher behavior; e) teacher attitudes toward innovation; f) professional orientation; g) relationships with staff, parents, and community; h) work milieu; i) evaluation; and j) training programs to effect attitude change. (PB)

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TEACHER ATTITUDES AND ATTITUDE CHANGE

Volume II: Summary and Analysis of Recent Research

by

Carolyn Stern and Evan R. Keislar

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PREFACE

In the welter of efforts to improve education, large scale programs are launched as an operation in which the various components, the resources of materials and people alike, must be marshalled to create the success of the venture. While any program involving national concerns must deal with a broad picture, it often happens the programs falter because a key factor, the human element, is inadequately considered.

This work deals with one such element: the classroom teacher. The success of any broad educational innovation in this country is not simply a result of whether the proper procedures are technically carried out; it depends heavily upon the cooperation of the teacher. Although, sometimes innovators have attempted to "by-pass" teaching personnel by making so-called "teacher-proof" materials, the key role played by teachers cannot be ignored. No innovation is likely to be successful unless the teachers' reactions to the program are carefully considered.

In the following pages, therefore, we have attempted to bring together a wide variety of findings about what teachers think and believe about the practices, the people, and the issues in the schools of this nation. Here are summarized their opinions and preferences, their feelings and values--their attitudes. In this report, every effort has been made to present the evidence about teachers honestly, realistically, and objectively, as revealed by a vast number of diverse research investigations. There has been no attempt to present teachers in their "best" light.

In reviewing this book, therefore, one may disagree with some of the opinions teachers hold. The reader may feel that on certain questions most teachers are wrong or misguided, that teachers need to be "educated." There may be, however, some comfort in the fact that on few questions do teachers speak with a single voice; they differ fully as much as any other professional group.

But the authors believe that teachers, themselves, are in a strategic position to gain significant knowledge on many questions. No other group is so intimately and continously in contact with the educative process. While teachers' judgments may be based on only part of the picture, on a wide range of issues their opinions offer a source of evidence which must be respected by those concerned with creating improvements in education.

The authors hope that this document will clarify the fact that, in the process of educational change, the teacher must be listened to, and above all, understood.

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TEACHER ATTITUDES AND ATTITUDE CHANGE

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INTRODUCTION

Purpose of Volume II

This book is intended as a resource for those who are involved in making decisions where teachers, and especially teachers' attitudes, are concerned. It is designed to offer ideas, help, alternative courses of action, suggestions, catalytic thoughts, and possible new directions to the practitioner who is faced with educational questions involving teacher attitudes. In many cases it will provide the educator, already engaged in or contemplating a particular innovative program, with insights from experiences of others who have also explored a similar type of approach.

It should be noted at the outset that this book deals with but one of the many factors which need to be considered in any decision. The focus here is upon the attitudes of teachers and the conditions of change. To define more precisely the nature of the materials and the rationale for their inclusion, the first chapter includes a discussion dealing with the nature of attitude, the ways attitudes are assessed, and the values and limitations which information about attitudes on educational questions have for both individuals and groups.

The information in this research review was gleaned from a survey of the literature on teacher attitudes, covering approximately 5,000 references. From these the most significant theoretical and empirical studies were drawn upon to provide guidelines for delineating and organizing the materials in substantive topics or areas. It is expected that this functional approach will be most helpful to the educational practitioners for whom all three volumes have been prepared.

Instructions for Use

To obtain the greatest benefits from this reference, the user must be aware of the nature of the information provided and be on guard against the danger of over-generous generalization. In the first place, this volume is intended as a resource. It is not by any means a "how-to-do-it" book. None of the statements can be viewed as completely axiomatic or prescriptive. Unfortunately, research in education has not reached the point where it can furnish the unequivocal answers to critical issues which all educators seek.

There are several reasons why findings from research studies cannot be prescriptive, why such results cannot be indiscriminately applied, like rules, to a wide variety of local situations. One reason is that the particular school setting may have special characteristics not present in the reasearch investigations (a distinctive group of teachers, for example). Furthermore, the research studies themselves are not perfectly reliable; there is always some degree of uncertainty about the results, hopefully, very small. Lastly, the best communication between the researcher and the user, invariably words, do not always convey accurately enough just what was done and what was found.

While the results should be used thoughtfully, the potential user should not take too casual a view of the findings. There are a wide variety of ways in which the findings can be of service to the practitioner. In general, there are three types of results which are of interest. First, some studies explicate the attitudes which teachers currently hold with reference to some individual, group, or issue. Such descriptive findings in themselves are of interest to administrators, staff developers, or other educators. In particular, they call attention to attitudes whose influence in the educational process may have been

previously overlooked. Also, the methodology or techniques used for attitude assessment in such studies can be of particular interest.

A second category of studies includes those concerned with relationships which, while not providing information as to causes, may still be of heuristic value. Additionally, findings from such studies may help to clarify the nature and organization of the components of different attitudes.

Finally, a third type of study attempts to shed light on the cause-and-effect relationships through the use of an experimental design. While generalizations from these investigations may be limited, a thoughtful analysis and consideration of the conclusions can be most helpful to those attempting to bring about similar changes.

While it is quite likely that certain studies may provide persuasive bases for specific courses of action, the attempt has been made throughout to remain completely objective. This review presents, nonjudgmentally, the findings of the strongest research and the soundest theoretical formulations which this literature search has uncovered.

One final word. This volume presents information about what teachers' attitudes are and how they are changed. However, because studies sometimes demonstrate that teachers' attitudes <u>can</u> be changed, even in directions viewed as "favorable" by the investigator, this does not mean that teachers' attitudes <u>should</u> be changed in the direction or the manner reported. The readers of this book must decide what values and philosophy are appropriate to their own situations.

CHAPTER I

THE NATURE OF ATTITUDES AND ATTITUDE MEASUREMENT

Introduction

The affective aspects of teaching have always been recognized as an important feature of the educative process. Writers have often pointed out the importance of a teacher's enthusiasm for his subject; his concern for his students' progress, his excitement about the act of learning and his love of teaching. Research has helped to distinguish these motivational and emotive features of teaching from a teacher's competencies, such as his comprehension of the subject matter and his ability to help students learn. Teacher competencies refer to what a teacher can do under specified circumstances; affective characteristics usually connote what a teacher is likely to do or will do (including emotional and verbal expression).

A wide variety of terms have been used over the years to describe this conative, feeling aspect of a person's life: motivation, emotion, interest, want, need, value. But the word attitude has been prominent in the language investigators have adopted, (Mc Guire, 1968). In fact, in his classification of all learning outcomes of school into five domains, Gagné (1973) selected the word attitude to describe this entire affective field.

Originally, the term attitude referred to body posture (as in the field of art), but it was Thomas and Znaniecki, in their treatise The Polish Peasant in Europe and America (1918), who gave it the modern connotation. They found it a valuable conceptual tool in dealing with many of the changes the immigrant displayed.

For Thurstone, a pioneer in the 1920's in developing measures of this concept, attitude was described in terms of the extent to which a person's opinions reflected, on a favorable-unfavorable continuum, a position with respect to a certain topic. While there has been a wide variety of definitions offered over the years, McGuire (1968), in a recent review maintains that Allport's definition, offered early in the history of this field of research, is still the most helpful:

> An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related. (Allport, 1935).

Nature Of Teacher Attitudes

Although there are many ways to talk about attitudes, there is considerable agreement about some features. This is especially the case among those who are studying the attitudes of teachers.

First, attitudes always include an affective or evaluative component, they involve liking or disliking, approaching or avoiding, a judgment as to the worth or goodness of things. Attitudes always deal with the way a person feels in addition to what one knows or believes.

Second, attitudes are always expressed in relation to some object or thing. This attitude object could be an idea, a person or group, an institution, a practice or activity, a law, and so forth. Teachers have both favorable and unfavorable attitudes toward many educationally important objects: the practice of grading, the subjects

they teach, the policies of the school, the different students in their classes. The rest of this book is organized in terms of the objects in school settings toward which teachers have attitudes.

Third, for most of the studies reviewed in this volume, there is the assumption, rarely made explicit, that an attitude constitutes an inner state of the individual, a predisposition to behave in certain ways. McGuire (1968) has elaborated six different methods of conceptualizing attitudes, ranging from a strictly operational view to a variety of mediational models. Investigators rarely define teacher attitudes in purely operational terms. (For one exception see Mager, 1968.) Instead, teacher attitudes fulfill a type of mediating role and are inferred from behavior of some kind, usually verbal. In this respect, then, teacher attitudes are hypothetical constructs with the limitation and advantages such an entity possesses. While they may involve excess baggage, they may also have a convenience and heuristic value in suggesting new theories or questions.

Fourth, attitudes are most validly expressed where there is a choice of behaviors. In inferring a teacher's attitude from what is said and done, one must pay attention to the situation faced by the teacher, the choices available and the threats or incentives which are offered. For example, a principal, who is a fervent and dogmatic believer in the value of team teaching, should not expect during a faculty meeting to discover the attitude toward this practice of most new teachers on his staff. However in schools where teachers find an atmosphere of trust and acceptance of different points of view, the principal may find teacher attitudes expressed in a more valid fashion. It is for this

reason that most of the studies of teacher attitude ask teachers to respond anonymously or make it very clear that the teachers' responses to the questions will be kept in strictest confidence.

Fifth, there is universal agreement that, as indicated by Allport's definition, attitudes are learned through experience. This statement is an "optimistic" view because it indicates that destructive attitudes might be unlearned and productive ones acquired. Unfortunately many of the basic and enduring attitudes which are counterproductive are most resistant to change. Nevertheless, there is some evidence to suggest ways in which teacher attitudes, especially new ones and those less deeply ingrained, are acquired and modified. Studies dealing with changes in teacher attitudes are reported throughout this volume in the chapters corresponding to the topics involved.

Sixth, it is generally agreed that attitudes influence behavior. How much and in what ways depend upon the particular attitude, the way it is defined and measured, and the kinds and measures of the behavior involved. Since what a teacher does is affected by so many factors, it is naive to assume that teachers' attitudes determine what they do. A fuller consideration of this question is presented in a subsequent section in this chapter.

Relation Of Attitude To Other Concepts

It is not easy to clarify the word attitude as distinct from other affective terms; the lines are usually unclear (cf. Thornberg, 1973, pp. 282-283).

In general, attitudes may be distinguished from personality traits in that attitudes are always directed towards an object; traits refer to broad enduring patterns of behavior. But since attitude objects can be very broad, some deep-seated attitudes may seem very much like personality traits (cf. Allport, 1931). The word interest connotes a pattern of "activities for which we have a liking or disliking" (Strong, 1950). Interests may be regarded as a special type of attitude in which the activities themselves represent the attitude object; an interest carries the connotation of personal participation.

A belief, according to Rokeach, is "any simple proposition conscious or unconscious, inferred from what a person says or does, capable of being preceded by the phrase 'I believe that.....'". It is important to note that although teachers have many beliefs which do not reflect attitudes, attitudes always involve a system of beliefs. Often people with the same attitude (i.e. the same degree of favorableness toward an object) may have very different beliefs about the object. In other words, they differ tremendously in the reasons why they display a particular attitude.

A value may be regarded as a very basic and broad attitude. Rokeach has proposed that an adult has probably hundreds of thousands of beliefs, thousands of attitudes, but only dozens of values. An opinion is a verbal expression of an attitude or a belief. But only those opinions which express some kind of evaluation are, of course, indications of an attitude.

Components of Attitude

There are three different aspects of attitudes: (1) the affective, reflected in how the person feels, (2) the cognitive, reflected in the perceptions or the beliefs of the individual, and (3) the behavioral, reflected in the way the person acts. Different investigators have stressed these features of attitude in different ways.

(1) The Affective Component.

For many investigators the key feature of an attitude is the affective aspect. Thurstone defined attitude as "the amount of affect for or against a psychological object" (Thurstone, 1931, p. 261). Fishbein (1967) has pointed out that, although on attitude tests the subject is faced with a variety of opinion statements, reflecting different beliefs and anticipated behaviors, the scoring is always in terms of the affective component, the degree of favorableness exhibited. The end result of a single "affective" score is quite defensible. Fishbein notes that in the semantic differential studies of meaning, Osgood found that one of the three independent factors represented an evaluative dimension, expressed in bi-polar terms as "good-bad." (Osgood, 1953).

(2) The Cognitive Component

For many individuals the cognitive aspect of attitude is the most critical. For Rokeach, the key element is the concept of belief. While he maintains that all beliefs are predispositions to action, some kinds of beliefs constitute attitudes. He defines an attitude as "a relatively enduring organization of beliefs around an object or situation predisposing one to respond in some preferential manner" (Rokeach, 1968). From this position, therefore, an attitude represents a special type of belief.

(3) The Behavioral Component

The behavioral aspect of attitude is stressed by some investigators. Gagné, for example, while considering an attitude as an inner state, stresses action. He defines attitude as "an internal state which affects an individual's choice of action towards some object, person, or event." (Gagné, 1974, p. 62). Consequently, attitudes should be assessed by noting one's choice of personal action. While direct observation may be more valid, one usually relies on self-reports such as what a person might do in a hypothetical situation. For example, in measuring attitudes towards race, Bogardus (1928) asked individuals to agree or disagree with sentences such as "I would accept this person as a neighbor" (cf. Pace, 1936, Triandis and Triandis, 1965).

For some writers, (e.g. Mager, 1967), the behavioral aspect of attitude is stressed so much that attitudes are defined in terms of approach-avoidance behavior. If an individual approaches the object, seeks to extend his contacts with it, talks about it in favorable ways, he has a favorable attitude. If on the other hand he avoids the object by moving away, by attempting to get rid of it, by talking unfavorably about it, then he has an unfavorable attitude. The attitude is not inferred from the results of an attitude test; the attitude is the approach-avoidance (i.e. favorable-unfavorable) behavior.

The Measurement of Teacher Attitudes

In the light of the above discussion, it might seeem that the very best way to assess a teacher's attitude would be to observe the teacher's behavior directly. For example, to find out a teacher's attitude toward handicapped children, teachers would be observed to determine to what extent they relate favorably to handicapped children in their classes.

In his review of instruments developed to study teachers' classroom behavior, Rosenshine (1970) classified the devices into two groups depending on whether they use a system of categories or ratings. If teacher attitudes are to be assessed, an observational instrument which simply reports the frequency or proportions of different kinds of certain teachers behavior might define attitudes operationally. For those which rely on ratings, the attitude measure would involve a good deal of inference.

In actual practice, however, investigators rarely observe teacher behavior as a measure of attitude. Instead, teachers are asked to give a verbal report of some kind about their own feelings, opinions, or behavior. The answers are scored in terms of favorableness or unfavorableness toward the attitude object. "Teacher attitude", therefore, almost always means the results of a paper-and-pencil attitude test. If classroom observations are used, the information with the label of "teacher behavior" is usually analyzed to validate an attitude test.

This almost universal use of verbal tests to measure teacher attitude is easy to understand. Measures of classroom behavior are indeed time-consuming, expensive, and raise a host of other questions. Khan and Weiss summarized the situation as follows:

> In view of the difficulties associated with direct observation in natural settings (e.g. limited sampling, observer bias, complexity of behavior, cost) and the ethical and moral issues and scoring problems of disguised testing, self-report inventories will remain the major sources of collection of data on attitudes. (Khan and Weiss, 1973, p. 766)

In verbal instruments for assessing teacher attitudes, completely open-ended questions are seldom found. Although they may, in some ways, yield more valid measures, they are quite difficult to score and interpret. Most attitude tests employ closed questions where the respondent selects one or more alternatives from a set of options to indicate his personal opinion or judgment. Following the three-fold classification system of Hoepfner, et al (1972), the statements may consist of judgments (e.g. "Children should be given more freedom in school"), speculations ("If I were given the invitation, I would like to teach in a free school like Summerhill."), or self-report of own behavior ("I permit children to select their own books for reading.")

In his pioneering work on attitude measurement, Thurstone (1928) developed a technique which resulted in a psychophysical scale for each attitude. Today, however, most of the instruments to assess teacher attitude have been created through a simpler and easier procedure developed by Likert (1932). Statements, varying in degrees of favorableness and unfavorableness (but not neutral), are responded to usually with one of five responses: Strongly agree, agree, no opinion, disagree, strongly disagree. For each statement a person might be given 1 to 5 points depending on whether the item was favorable or unfavorable. For example, strongly agreeing with a favorable statement would mean 5 points; strongly agreeing with an unfavorable statement would mean only 1 point.

Variations of this procedure are often found. Sometimes the choices are reduced to three or even two, (Agree, Disagree) or for simple questions, (Yes, No). For some statements, especially those involving self-report of behavior, the respondent may indicate frequency of behavior: always, usually, sometimes, never. Sometimes, as in the case of the Minnesota Teacher Attitude Inventory, weights are assigned to the response for each item on an empirical basis, reflecting the way two different groups of teachers have answered the question.

Although there are many other possible approaches to the assessment of attitudes, (e.g. projective methods, role playing, Q sort, Delphi technique), there are only isolated instances where these have been systematically used for measuring teacher attitude. (See McGuire, 1968, for a review of the field of attitude measurement.)

Teacher Attitude Measures

A number of instruments have been created to measure different teacher attitudes. Unfortunately, most of these have been devised to serve the specific purposes of a single study, and relatively few measures are put to use more than once. But there are some instruments that have been developed and used in a variety of investigations. One list of many such devices is to be found in the catalogue of tests published by the Center for the Study of Evaluation (Hoepfner et al, 1972).

By far the most widely used scale for the assessment of teacher attitudes is the Minnesota Teacher Attitude Inventory. Created in 1951, it has been revised and most extensively studied over the years. It was designed to measure "those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships and how well satisfied he will be with teaching as a vocation" (Cook, Leeds, and Callis, 1951).

The instrument referred to as MTAI, consists of 150 items to which a person responds on a five-point scale ranging from "strongly agree" to "strongly disagree". The items are generally short, such as "Children should be seen and not heard", and "Without children, life would be dull." Items in the test were selected from a longer list because they distinguished between two groups of teachers: 100 superior and 100 inferior teachers judged by their principals on ability to maintain a "harmonious" relationship within the classroom. The inventory itself was found to have a corrected split-half reliability of .91 and Leeds (1969) recently reported on the predictive validity of the MTAI. Using a modified scoring key, the correlations of the MTAI with combined ratings made by principals, pupils, and outside observers, produced validity coefficients of .47 and .55, respectively, for beginning teachers and inexperienced graduates.

Among the many other instruments to assess teacher attitudes which have appeared are the Education Scale VII (Kerlinger and Kaya, 1959), Sciara-Jantz Empathy toward Poverty Scale (Sciara and Jantz, 1973), The Teacher Questionnaire (Hertzog et al 1970), The Stern Teacher Attitude toward Evaluation (Stern and Rosenquist, 1970), Values Concerning Disadvantaged Pupils (Gies and Alspaugh, 1973), Pupil Control Behavior, PCB, (Helsel and Willower, 1973). Most of these attitude instruments have received only preliminary testing, but they serve to indicate possible methods for gaining information about teacher attitudes. Well-known personality measures, such as the California F (Authoritarian) Scale, the Allport-Vernon-Lindzey Study of Values, Strong Vocational Interest Test and the Kuder Preference Record, are frequently mentioned in relation to teacher attitudes.

In interpreting teacher attitude tests, it may be important to note the results of empirical studies. For example, sometimes attitude

tests are measuring a variety of variables - not just one as supposed. Of the more than 80 studies of the MTAI, it is not suprising that this question has been raised with this well known device. Yee and Fruchter (1971) found that the MTAI does not measure a single dimension. There were at least five, fairly independent factors, the major one being described by the title "Traditionalistic versus modern beliefs about child control" (Khan and Weiss, 1973).

Most verbal attitude tests are based on the assumption of a "favorable-unfavorable" continuum, with a "neutral" position in the middle. However, Yee and Fruchter (1971) found that factors on the MTAI rarely included items which were both negatively and positively worded statements. Unfavorable opinions apparently reflect something other than the precise opposite of favorable ones. This possibility is probably even more important to note for tests where two positions are assumed to be opposite. For example, Kerlinger (1967) showed on Education Scale VII, that progressivism and traditionalism are not opposites; they are independent of each other. A person who scores high on the progressive scale may be neutral on the traditionalist dimension. In effect, the progressive may not be concerned with the issues which the traditionalist thinks are important.

The susceptibility of all personality measures to the possibility of faking is well known, and attitude tests are no exception. Scores on the MTAI, for example, can be raised or lowered by simply telling respondents to fake in "permissive" or "authoritarian" directions, although there is some disagreement as to how much. It would seem that teacher attitude tests can not be used for hiring, for screening, or where the respondent perceives a personal stake in the results of the test (Rabinowitz, 1954, Coleman, 1954).

Attitudes and Prediction of Teacher Behavior

How well can one predict teacher behavior by knowing the results of a teacher attitude test? The answers provided by research studies to this broad question as one might expect, are quite inconsistent; the findings depend upon the particular attitude test, the specific measures adopted, and the situation. In his review, Wicker (1969) found that most studies show low correlations between verbally expressed attitudes and actual behavior, with correlations generally below .30. Typical of findings reported in this area is that of Seibel (1967) who found that actual teaching behavior, suggesting warmth and ease of student-teacher interaction, was poorly predicted by nine attitude measures.

On the other hand, there is no doubt that some verbal self-report attitude tests do correlate with certain measures of teacher behavior. Yee and Fruchter (1971) reviewed a number of studies to show that teacher attitudes are clearly related to their classroom behavior as judged by students or by outside observers (Seidman and Knapp, 1953; Silberman, 1969; Murray, 1969; and Reed, 1953). The fact that other studies fail to find this close relationship should lead to careful analysis of the factors involved, as Pedhazur (1973) has thoughtfully reminded us.

The problem partly reflects the fact that the definitions and measures of attitude are not made with insightful attention to what is being measured, to the rationale for the instrument or to the methodology of instrument development and use. (Some of these points have already been briefly alluded to earlier in this chapter).

Nevertheless, it is frequently forgotten that the behavioral measures themselves are also highly suspect. We need to be just as careful about the behavior with which the attitude test results are

being related. Some attitude measures might be useful in predicting teacher behavior in situations other than the classroom, for example, behavior in staff meetings, in parent conferences, in community life. But even classroom behaviors are difficult to define and measure. All too frequently, as Fishbein (1972) has noted, studies of attitude-behavior relationships have attempted to predict very specific behaviors from some general attitude measure. Completely overlooked in these studies is the likely possibility that other measures of behavior would not correlate higher with this specific behavior criterion either.

What Fishbein has suggested is that to predict specific behavioral acts, one should use an instrument that assesses the subject's intention to engage in this behavior. Adopting this approach, Mitchell (1972) developed both a general attitude measure, along traditional lines, and a set of verbal items to asses 10 specific behavioral intentions, each representing a highly specific inquiry strategy, initiated by the teacher, in values clarification. Even though several weeks elapsed between the attitude test and the classroom behavior, correlations between the specific intentions as verbally reported and the corresponding behaviors were fairly high, .54 to .68. The general attitude test predicted the general multiple teaching intentions better than did any single intention.

One approach to the development of instruments which predict classroom behavior is simply to select from a large sample those items which empirically bear some relation to the way teachers behave. This was the method adopted by the developers of the MTAI. Along these same lines, Lawrence (1972) developed an instrument in which four-fifths of the items correlated both statistically and logically with observational data on teachers' classroom behavior. Gage has underlined the point that

the "dry dust" empiricism used in such instrument development is not productive in the long run. He found that scoring the MTAI in a straightforward Likert fashion, without the empirically-derived, complicated scoring system, yielded as good if not more valid results (Gage, 1957).

Teacher Attitude and Student Attitude and Performance

In one sense, the prediction of teacher behavior from attitude test results is really a secondary matter for those concerned with student outcomes. The important question is "What is the effect of teacher attitudes upon student attitude and performance?" Although it is desirable to get evidence about the intervening affective behaviors of the teacher, in some ways the question is independent of observable teacher behavior. A teacher's attitude may bear little relationship to what can be measured of his or her behavior in the classroom. And, yet, through unobserved cues, it may have an impact upon student attitude and performance; teacher-student relationships are subtle indeed.

It should be no surprise that the relationship between teacher attitude and student outcomes is unclear. While many studies fail to establish any connection, there are others which suggest the importance of teacher attitudes. Khan and Weiss have pointed out (1973) that there is little evidence that teachers' attitudes (as measured by attitude tests) have any such student effects. One of the two studies they refer to showed no relationship between physics teachers' MTAI scores and student attitudes toward physics (Rothman, Welch, and Walberg, 1969). When attitude toward physics was assessed by a semantic differential technique, only weak relationships were found between teacher and student attitudes (Rothman, 1969).

There is also evidence that affective characteristics of teachers are related to student outcomes. In their review of the field, for example, Rosenshine and Furst (1971) found that teacher enthusiasm was among the characteristics associated with student achievement. Elsewhere in this book, positive relationships of teacher attitudes to student outcomes are reported. For example, Garner (1963) found that teacher's attitudes toward mathematics are related to both student attitudes and changes in student attitudes. Peskin (1965) showed that unfavorable teacher attitude toward mathematics, when coupled with high understanding of the field, was associated with low student achievement. It is not yet possible to identify the conditions under which teacher attitudes affect student outcomes, but a few tentative findings may be emerging. For example, it appears that an unfavorable attitude on the part of a teacher toward the subject is likely to induce negative student attitudes; it is less probable that a favorable teacher attitude will have positive effects.

Finally an ultimate concern in this field of research is how teacher attitudes are changed in ways that will make a difference in student outcomes. There is little evidence of this kind, even in the cognitive domain. But there are studies which have focussed productively on different aspects of this basic problem. For example, in a variety of fields many teacher attitudes do indeed change as a result of experiences. A review of these important findings will be found in appropriate sections of subsequent chapters.

CHAPTER II - CURRICULUM

Across the multitude of studies on teacher characteristics and effects, it has become almost a truism that the teacher has the most potent impact on the educational process in the classroom. It is therefore important to examine the attitudes of teachers to the broad concepts of curriculum planning, changing curricula, and the content of instruction.

There is a prevailing belief that persons who participate in planning and decision-making in a social enterprise have more favorable attitudes toward that enterprise. The application of this concept to education, probably receiving its impetus from the compensatory program ideology, has removed educational decision-making from the sacrosanct province of the "professional." Increasingly, community, parents, and all levels of school personnel, even the students themselves, have demanded and received a voice in schooling issues. For several years, this invasion of school authority was based on minority power struggles, with no assessment of the educative value of shared responsibility. More recently, however, there have been several attempts to evaluate the effects of changes in organizational structures.

Now in its fourth year, a longitudinal investigation of curriculum engineering (Beauchamp, 1974) is being carried out in a suburb of a large northeastern city. The installation of a curriculum engineering system, described as involving all personnel in the school district in

curriculum planning and curriculum implementation, is being studied to determine the effects of the program on teacher attitudes generally, their attitudes toward participation in a curriculum system, and teachers' behaviors as they participate in curriculum functions.

The findings generally support those of Langenbach (1972), who developed an instrument to measure teachers' attitudes toward curriculum use and planning. Responses of teachers, previously identified by their principals as having either positive or negative attitudes toward curriculum planning, were used to select 50 of the 307 original items tested. The inventory was then administered to 257 teachers, approximately half of whom had been involved in a curriculum planning effort. The experimental population included elementary and secondary school teachers and those with less-than-three, three-to-ten, or over-ten years experience in teaching. Persuasive evidence indicates that teachers involved in the curriculum planning process have more favorable attitudes toward the implementation of the subject courses than those who are required to present programs over which they have had no control.

Further extensions of these results are implicit in several studies concerned with problems attendant upon installing new curricula. Mahan and Gill (1972) have prepared a series of booklets to assist the school administrator in this area. The introductory information is based on the experience of extensive curriculum installations in 53 schools in New York and Pennsylvania. There is a checklist which documents each step in the installation process, and references and other resource materials are also provided. The authors stress the need to select new programs carefully, to conduct workshops, to provide extra assistance in the first stages of the program's adoption, and to conduct

on-going evaluations of the effectiveness of the new curricula. The major emphasis, however, is on the need to secure the cooperation of the teachers, with the further caution that careful planning and attention to the opinions and needs of teachers involved in the program are absolutely essential.

The question of how a teacher feels about a specific subject area has an even more direct bearing on the manner in which instruction is delivered in the classroom. There is a certain face validity to the assumption that a teacher's attitude toward a particular content area can have an important formative influence on students. Certainly teachers who exude enthusiasm for a subject have often excited and stimulated students to elect careers in their disciplines. There is an equally strong belief that many potential Einstein's have been nipped in the bud by classroom teachers who have failed to mask their own learned fear and hate of mathematics. To what extent these assumptions are well-founded has been questioned by a number of investigators. (Beauchamp, 1973; Langenbach, 1972; Mahan and Gill, 1972; and Tom, 1973)

A random sample of articles in the research literature on teacher attitudes toward specific subject matter areas was selected for inclusion in this resource handbook. The items cited are not necessarily the most definitive studies, nor do they attempt to encompass every possible curriculum area. They are only intended to be representative of the general state of the art at this point in time. For the rest of this chapter, the various content areas will be addressed in alphabetical order.

Art and Music Education

When queried, most educators agree that students should be exposed to a balanced curriculum, indicating an awareness of the importance of cultural enrichment subjects. However, investigations of teachers' attitudes toward fine arts curricula appear infrequently in educational research literature. In the few available studies, the plaint of the professional art or music instructor is that the classroom teacher evinces little appreciation for non-academic endeavors as part of the regular program. Art or music teachers who come into classrooms as special resource personnel are often perceived as outsiders. The current emphasis on academic achievement leads teachers to feel that periods devoted to the fine arts impinge on the time needed to develop requisite skills. Since teacher effectiveness under accountability programs is usually assessed in terms of such competencies, there is little payoff for the teacher who wishes to develop meaningful creative arts curricula. Hence, music and art teachers have low status in most school settings. (Hedden, 1973; Mittler, 1974) If the enrichment value of art and music is truly valid, and if children are to receive a meaningful introduction to cultural appreciation, it would seem that attitudes of classroom teachers need to be translated beyond the level of lip-service endorsement.

Bilingual-Bicultural-Multicultural Education

In the past decade, the federal government has taken the leadership in providing special funding for the education of economically-disadvantaged populations. Another major thrust has been the concern for a better approach to the education of children from families in which English is not the dominant language. There is sufficient overlap in these two groups so that most students in the Title VII Bilingual programs are also among the poverty population. Thus, teachers associated with bilingual education curricula have two sets of attitude objects to deal with: the low income family, and the "foreign", non-English-speaking child. The effect of attitudes toward specific student attributes is dealt with in a later chapter. Here the concern is with the teacher's attitude toward bilingual education.

Most studies of bilingual programs are concerned with the academic subject matter gains of the students. Some of these studies contrast the effectiveness of different theoretical models. For example, the ESL (English as a Second Lanugage) approach may be compared to the more comprehensive bilingual-bicultural curriculum. In the first case, children are usually taken out of the regular classroom for specific periods of instruction with a specially-trained ESL teacher. This model assumes that most of the children have some degree of competency in English and only those who are completely monolingual in another language need the special ESL program. Unfortunately, many children who seem to have a superficial understanding of English may still be extremely handicapped when expected to acquire subject matter competencies in the non-native language. Furthermore, ESL adopts a basically substitution philosophy. That is, the English language is to be substituted for the student's native speech. By implication, the child is

made to feel that English is superior and his own language is inferior.

In the bilingual-bicultural approach, a major emphasis is on establishing a positive self-concept in the minority child. This means that the culture and language of the child must be valued. Many minority children from poverty families have only an imperfect knowledge of their own language, and the minority child must acquire increased competence in the first language simultaneously with the acquisition of English. A bilingual-bicultural program provides an enriched curriculum. Not only the language arts program, but also a range of subject matter content is taught in both languages. English-speaking children are given instruction in the minority language and all children are given a background in the history and mores of the second culture.

For such an approach to have an optimal chance for success, the classroom teacher should be bilingual, and should have at least one bilingual teacher aide or assistant. This is an unrealistic expectation at the present time. Most frequently the monolingual classroom teacher who has a large proportion of ethnic minority children is arbitrarily required to participate in the bilingual program. Because of the classroom teacher's inability to teach in both the first and the second language, a variety of supplementary teaming arrangements have been devised. An accredited, bilingual teacher may come into the classroom at specified periods and provide the instruction in the second language, or there may be aides from the minority population who work with small groups of children. Whatever the mode adopted for the presentation of the bilingual program, the classroom teacher must surrender some degree of autonomy.

Although the literature repeatedly emphasizes the importance of

the teacher's role as the mediator of the educational experience in the classroom, there are comparatively few studies which examine the effect of the bilingual program on the classroom teacher, or, conversely, the impact of the teachers' attitude on the delivery of the bilingual program. Even in these studies, the major concern is with improved student performance and positive self-concept development, with assessment of teacher attitudes treated as a source of supplementary data. In essence, the need for a positive attitude toward the minority child is accepted as one of the basic prerequisites of a successful program. (Campbell, et al. 1973; Cohen & Promisel, 1970, 1971; Dulay & Pepe, 1970; Fox, 1973; Gumperz, 1970; Leaverton, 1971; Milwaukee Bilingual Education Program, 1972; Offenburg & Wolowec, 1973; Politzer, 1968; and Walker 1973.)

Drug Education

Educators are constantly aware of the pressure to add more and more courses to the traditional curriculum. While there may be some resistance to the inclusion of new courses in science or math, or other academic content areas (e.g. environmental science), there is often a great deal of opposition to assuming responsibility for instruction in areas involving moral or ethical concepts. Sex education and religion are familiar examples of sensitive subjects. Because of the recent penetration of drug use into the elementary grades, drug education has now joined the ranks of controversial courses.

While instruction in any subject matter is susceptible to the personal biases of the instructor, this is far more the case where moral and ethical issues are involved. Thus, it is important to investigate teachers' attitudes about drugs per se before attempting to assess their attitudes toward the inclusion of drug education courses in the curriculum.

An interesting dissertation (Gallagher, 1973) looks at the relationship between students' and teachers' attitudes toward adolescent alcohol and marijuana use and dogmatism. There was also an attempt to relate these attitudes to the sex of the student user. The results indicate no significant difference between a group of white, middle-class, suburban senior high school students and their teachers in their attitudes toward users. There was no generation gap, nor was there any difference in opinion based on sex. Students were significantly more dogmatic than teachers, and the teachers' attitude generally was that drug use is a social rather than an individual problem.

These findings are based on a small and limited sample, and may have little generalizability. Other researchers find major discrepancies

between the attitudes of drug educators and their students toward the use of drugs. But there seems to be general agreement that most teachers have little real knowledge about the drug culture. A number of training programs have been set up to disseminate information so as to modify teacher attitudes. In addition, workshops in emotional awareness have been designed to help teachers face the problems created by student drug users in their classrooms.

Of particular interest is an experimental comparison of the effects of two in-service training approaches to changing the attitudes of white, urban, elementary and senior high school teachers toward drug use. Such attitudes have proven very resistant to change in short workshop programs. Neither the group dynamics nor the behavior modification formats were significantly different in their effects, nor was there any difference based on the respondents' level of dogmatism. It is noteworthy that a control group which did not receive the in-service attitude-change program had a more favorable perception of the potential efficacy of drug education classes.

The role of the classroom teacher in drug education was examined in two workshops which focussed on exploring the dimensions of training programs. The objective was neither to provide in-service training nor to design a training program, but rather to determine what competencies were required to permit a teacher to serve as an effective drug educator. In addition to distilling a number of philosophical tenets which must underline drug education programs, the workshops emphasized that, even more than skills and knowledge, the competent drug educator must possess appropriate values and attitudes.

Moodie (1972) reports an evaluation of a film-package drug

education program intended for use by teachers, counselors, nurses, and principals in the intermediate grades. The majority of those who viewed the film and examined the accompanying kit of materials were in favor of the approach used. There was no available evidence as to how the teachers felt about the program after actual use with students in the classroom.

A curriculum in "family life education" which included education in sexual education, prevention of alcohol, drug, and tobacco abuse, was evaluated with over 6,000 beginning 7th graders and over 5,000 beginning 12th graders. A survey was then carried out to determine the influence of the program on knowledge and attitudes of children and their teachers. There was little to indicate that the program helped in understanding and identifying the underlying problems which give rise to drug abuse behavior.

To summarize, then, there is at present no basic knowledge of the effect of different personality variables of teachers which would enable any prediction as to the likelihood of becoming successful instructors in drug education programs. While there is almost universal agreement that there is a significant drug problem in the school-age population, little guidance as to the appropriateness or effectiveness of school-based drug education activities can be found in the current literature. (Doing drug education, 1972; Gallagher, 1973; Lindenauer, 1972; Moodie, 1972; Ojemann, 1969; Smart, 1973; Smith and Meyer, 1974; and Wendland, 1972.)

Early Childhood Education

Over the past 10 years a great deal of interest has been demonstrated in the education of the pre-elementary school child. The emphasis of this decade is definitely related to the compensatory programs initiated as a major strategy in the war on poverty. An underlying objective of all these programs is that of providing early stimulation experiences to facilitate the academic progress of children from economically disadvantaged families when they enter the elementary grades. Although the ultimate goals are not disparate, there is continuing disagreement as to the most effective procedures for their achievement. Early childhood specialists usually favor a developmental approach which focuses on social and emotional growth experiences, whereas schooling-oriented educators opt for more direct, pre-academic skill instruction. There is also another school of thought which believes that efforts and funds expended on the education of the young child are entirely wasted and that the effects may in many cases be detrimental to the normal course of child development.

The literature is replete with studies which attempt to demonstrate the superiority of one ideology over another, but in almost all cases the results are not definitive. It is not the province of this volume to provide a comprehensive analysis of the research in this complex area. The educator interested in greater detail will find a wealth of material in the ERIC Clearinghouse on Early Childhood, which references a number of excellent bibliographies as well as individual studies. In the present review there is an attempt to sample superficially across a variety of ideological approaches and to address specifically only the issue of teacher attitudes toward the education

of the preschool child. Two bibliographies which identify a teacher attitude category are also included.

While the trend to greater involvement of community and parents in schooling decisions and the use of paraprofessional aides in the classroom are evident across the grade levels, it is in the preschool and primary years, and with poverty and minority populations, that they have received their major impetus and have had the most important impact. Thus, studies of teacher attitudes toward early childhood education must take cognizance of these other confounding influences. For example, a major ingredient in the negative attitudes of some educators toward early schooling is an unconscious middle class bias. Such opponents of day care and other preschool programs are not averse to nursery school experiences for the more affluent child, nor to the academic stimulation provided by the middle class parent in the child's own home. There is also a strong element of genetic fatalism, i.e., that children from economically disadvantaged homes are intellectually incapable of benefiting from exposure to early academic stimulation. The emotionalism engendered by this type of thinking makes it well-nigh impossible to devise an experimentally-valid research design.

Another important area of disagreement in early childhood education is the basis on which the success of a program is determined. Although most teachers of young children express attitudes indicating high concern for emotional and social development, most programs are evaluated in terms of academic achievement, either immediately upon completion of the preschool year, or on reading achievement tests administered in the primary grades. Performance-oriented evaluations completely ignore the need to value the child's enjoyment of living in

the early years, which many teachers feel is of greater significance than any future gain in subject matter competence.

A further important effect at this early level derives from dissonance between the attitudes of the early childhood educator and those of the teacher in the primary grades. This is additionally confounded by the fact that the teacher in the inner-city, poverty school traditionally has different behavioral expectations for children than those held by teachers in a compensatory program such as Head Start. Some of the gains made by children in preschool settings were found to evaporate quickly when the children entered classes in which teacher attitudes toward appropriate classroom behavior were at variance with those of the preschool experience. Currently a number of programs are attempting to counteract the unfortunate effects of differences in the attitudes of teachers at the preschool and primary levels. Programs such as the California early childhood plan instituted by Wilson Riles, and the Developmental Continuity projects supported by the federal Office of Child Development, are specifically addressed to bridging the gap between the value systems at these critical levels. (Brown, 1972; Durrett, 1972; ECE Learning system for migrant children, 1969; Goolsby & Darby, 1969; Gordon, 1972; Gross, 1970; Katz, 1970; Nesset & Faunce, 1972; Skinner, 1970; Stern, 1970; Weikart, 1970; and Whipple, 1970.)

English

Attitudes toward the teaching of English have been affected by two somewhat divergent influences. The study of linguistics has led to an increasing openness to different types of speech patterns for different communication uses. Within this context, dialect is viewed as simply another level of speech rather than an ungrammatical or inadequate form of the English language. Accompanying this more relaxed approach has been a decreasing emphasis on the rules and absolutes of correct grammar. This increasing flexibility has been somewhat countered by the introduction of behavioral objectives into the English curriculum. Both of these influences have pervaded the training courses for the preparation of English language teachers.

Prior to 1964, many English teachers felt that their preservice training was inadequate. More recently, there has been a steady improvement in the quality of training and a concomitant increase in preservice training satisfaction. At present, most prospective English teachers take courses in advanced composition, and at least one or two courses in linguistics. There are also many more secondary English teachers who have been exposed to education methods courses in language arts. Student teachers in preservice practicums are notably influenced toward the teaching of English by the attitudes of the master teachers under whom they are trained. Even short term NDEA type institutes, which have little effect on attitudes toward education in general, may have a measurable effect on attitudes in areas closely related to subject matter content.

English teachers are interested in practical goals directly related to the study of English, rather than social or humanistic values.

Variables such as age, sex, grade level taught, academic training, length of teaching experience, and characteristics of students may be associated with differences in attitudes toward English teaching objectives. But these relationships are not sufficiently precise to provide a basis for selection of potentially successful English teachers. (Lowery, 1972; Peters, 1971; Turley, 1969; and Zollo, 1971.)

Foreign Language Instruction

In a 40-page, double-column, comprehensive review of the entire field of foreign language instruction, Carroll (1963) devotes less than one column to the foreign language teacher. After an introductory comment that "the competence of the teacher in the foreign language will have an important bearing on the success of the instruction," the discussion is concerned with credentialing requirements and with the question of whether native teachers are preferable to foreign-born. There is also reference to the work of Thomas (1954) in which it was pointed out that of 309 institutions preparing teachers of foreign languages, 69% offer courses in teaching methods. Carroll comments: "No research reports seem to have been made on the utility or efficacy of such courses."

A great deal of detail is presented on teaching methods, contrasting traditional "grammar-translation" with "direct" instruction. Carroll also discusses the characteristics of modern approaches, such as "audio-lingual" or "aural-oral," contrastive structure analysis, pattern practice, and total immersion techniques. There is a good deal of material on instructional aids, from the traditional textbook to the modern technology of teaching machines, programming, and language laboratories. The characteristics of students essential for successful foreign language acquisition are also explored. But nowhere is there any discussion of how the foreign language teacher feels about any of these features of the instructional process. Since the chapter is extremely scholarly and exhaustive, it can be assumed that if there were studies of teacher attitudes in this review of research prior to 1963, they would have been included.

This lacuna in the study of foreign language instruction was

noted several times during the 1966 Washington Foreign Language Program conferences. Subsequently, a survey was carried out and a great deal of information collected from a sampling of almost 500 foreign language teachers in the State of Washington. The first part of the study dealt with the demographic characteristics of the population: level of teaching assignment, experience, language proficiency, school enrollment, and daily schedule. Approxiamtely 26% of the sample were junior high school teachers and 64% senior high school teachers.

It is the second part of the survey, focussing on the attitudes of foreign language teachers, which is of particular concern here. To begin with, and as might be expected, at least 89% of the teachers felt that foreign language instruction was an appropriate subject matter area for inclusion in a public school curriculum. An interesting dualism was revealed when the basis for a positive response was queried. The majority of the teachers indicated that the most important reason for teaching a foreign language was a national need for speakers of foreign languages. There was also support for vocational and travel values. Evidently the utilitarian rationale was most frequently used to persuade Boards of Education to support foreign language instruction in junior and senior high schools. Yet the foreign language teachers perceive themselves as psychological or cultural catalysts. In other words, they have chosen this study area for its cultural and historical associations, and believe that the acquisition of a second language opens children to an enriched perception of themselves and the world in which they live.

This dichotomy is reflected in the high level of endorsement

of a two-track system in foreign language instruction: a vocationally-oriented course for the terminal high school student, and a culturally-oriented course for the college-bound student. Although the responses varied with the language taught, there was general agreement that opportunity to study a foreign language should be available to all students, not only those at the upper level of intellectual capacity. Latin teachers were more apt to want to include only the most capable students, whereas teachers of Russian and Japanese expressed readiness to accept any ability level in their classes.

A large proportion (71%) felt that large classes presented more problems in foreign language courses than they did in other subject areas. Senior high teachers stated that 30 students constituted too large a class, whereas this seemed an appropriate class size to the junior high teacher. At least 59% of the respondents agreed that foreign language instruction should begin at third or fourth grade, or even earlier. This was particularly true of the junior high teachers who had had experience with children coming out of the FLES program, which begins at the fifth or sixth grade. The implication which may be drawn here is that the Foreign Language in Elementary School program, which tends to use an audio-lingual approach, has not been an unqualified success. In spite of this, the attitude of most (56%) foreign language teachers is that some type of FLES program should be mandatory.

Articulation between junior and senior high school language instruction is one of the most troubled areas. At least 62% of the high school teachers feel that the junior high foreign language teachers should make a greater effort to prepare their students for high school language classes. There was an equally strong critical attitude

toward the quality of college and university teacher training of foreign language high school teachers.

Another recent study of the attitudes of foreign language teachers was carried out in Florida. The focus of this investigation was to determine which teacher characteristics and which beliefs about foreign language teaching were predictive of receptiveness to contemporary methods of teaching foreign languages, and to the use of the language laboratory. A 50-item belief scale and a 13-item teacher questionnaire were filled out by 123 teachers, representing a random sample of all foreign language teachers in 27 counties in the State of Florida. Factor analysis of the scale produced five independent factors: use of language laboratory, age of learner, background for foreign language study, extent of use of English in the classroom, and methods and techniques of instruction.

There were no significant relationships established between teacher characteristics and any of the five categories of instructional attitudes. In spite of widely held assumptions to the contrary, the study revealed little evidence that a foreign language teacher's background and experience have any significant relationship to the teacher's attitudes toward modern foreign language teaching methodology. Specifically, neither age, sex, foreign language teaching experience, academic degree, how the language was learned, experience in learning to use the language laboratory, extent of in-service training or workshops, or recency of exposure to language teaching methods, offer any basis for prediction as to how receptive the foreign language teacher will be to adopting contemporary approaches to the teaching of a foreign language.

(A survey of foreign language teachers' assignments and attitudes, 1971; Carroll, 1963; Elmquist, 1973; Hulet, 1970; Lippman, 1971; Papalia, 1973; Pinder, 1972; Schwab, 1972; and Wolfe, 1970.)

Home Economics:

Under this rubric are included attitudes of teachers toward consumer education and nutrition programs, both of which are assumed to be related to the broad content core of home economics courses. Furthermore, the literature in this area is primarily concerned with teacher attitudes toward the introduction of new emphases in the traditional home economics course. In general, both teachers and students have a positive attitude to the inclusion of consumer education, particularly at the high school level. A survey of attitudes of high school teachers of business education, social studies, or home economics courses toward pertinent consumer issues revealed no significant differences among these three groups. The social studies teachers tended to be more consumer-oriented, but all the teachers indicated a favorable attitude toward the inclusion of discussions on consumer issues.

The work experience and attitudes toward instruction of home economics skills were studied to determine whether there was a relationship between competence and willingness to teach home economics units on an occupational level. More than 50% of the group surveyed had had work experience in food service occupations and were willing to prepare students for job opportunities in this field. Those with experience in child care and clothing services were also highly favorable to teaching these skills because of the opportunities for student employment.

(Bowden, 1972; Burton, 1971; Haskell, 1974; O'Farrell & Kendrick, 1972; and Peterson & Kies,1972.)

Mathematics

It is generally believed that teachers' attitudes toward a particular subject matter have a profound effect on students' attitudes and performance in that subject. This is especially true of mathematics. Students frequently attribute their dislike of the subject to hostile or ineffectual teachers. Because of the importance of these hypothesized relationships, a great deal of research literature concerned with teacher attitudes toward mathematics has been generated.

The review of attitudes toward mathematics by Aiken (1970) provides a most comprehensive source of information in this area. Research cited indicates that at least one-third of elementary school teachers have negative attitudes toward mathematics. Preservice instruction has little positive impact. Further data seems to indicate that there is a significant relationship between teacher and student attitudes in the first-year algebra course. Aiken considered many of the studies inadequate and recommended better experimental designs and controls. More recent research attempts to avoid some of the criticisms and to add to our knowledge in this field.

Positive attitudes toward mathematics were demonstrated in two studies in which programs designed specifically for improving such attitudes were used. Pupil gain was also associated with the more positive attitude. There is also evidence that more experienced instructors score significantly higher in math applications and have a more positive attitude toward mathematics than prospective teachers. The number of math courses completed during training seems to be a dominant determinant of positive math attitudes.

The students of teachers with a relaxed, informal approach

to mathematics achieved significantly higher scores on attitude, computation, and comprehension at the third grade level, but there were no observed differences on this variable at the sixth grade level. Another exploration of grade level differences demonstrated that the attitudes of children grow increasingly more negative as they go from third to sixth grade. This finding is based on the same-year comparisons of different grades rather than a longitudinal study of the same children. Thus, some of the effect may be due to sampling differences. But there is sufficient basis for classroom teachers of the middle grades to reevaluate what it is in their attitudes and/or teaching behavior which makes the study of mathematics increasingly unpalatable to young children.

The relationship of attitudes toward mathematics and specific math instruction programs has also been studied. Many teachers favor an individualized approach, such as IPI, and grouping of ability levels for the teaching of arithmetic has been prevalent for many years. Yet no reliable relationship has been established between favorable teacher attitudes and greater efficacy of instruction. A large-scale evaluation of a modern televised arithmetic curriculum for children in grades one through six (Patterns in Arithmetic) was carried out in both rural and urban schools. One of the objectives of the study was to determine whether the program would affect teachers' attitudes toward the teaching of arithmetic. The results indicated that PIA could be used effectively for in-service training, particularly for teachers with relatively limited knowledge of basic mathematical concepts, but it did not change teachers' attitudes to the teaching of arithmetic.

This sampling of the research on teacher attitudes indicates that there is little evidence of a significant relationship between

positive teacher attitudes and positive affect or gains in students. There is evidence, however, that negative teacher attitudes do have a deleterious and inhibiting impact on student attitudes and achievement in mathematics. In the light of the available research data, it would seem desirable to institute flexible programming and team teaching arrangements permitting teachers more options as to whether or not they should take responsibility for mathematics instruction.

(Aiken, 1970; Antonen & Deighan, 1971; Collier, 1972; Higdon, 1972; Hunkler & Quast, 1972; Marshall & Fischbach, 1972; Shulte, 1967; Singleton, 1971; Van de Walle, 1973; and Wolfe, 1970.)

Reading

There is a voluminous literature on the study of reading methods. Hundreds of studies have compared the efficacy of one type of reading program or approach with another. The findings are too complex to report here, nor would they be pertinent to a study of teacher attitudes. But in one area there is consensus: teachers involved in experimental studies expressed favorable attitudes to the program tested. Even where objective evaluations do not indicate any measurable gains, teachers may report affective values such as "a greater interest in reading." This has been found with a wide range of instructional orientations, including behaviorally based programs such as Distar or BRL, individualized instruction, i.t.a., and experience-story approaches.

This shifting from negative findings to subjective judgments is also characteristic of studies of in-service programs. An in-service training program designed to develop favorable attitudes toward diagnosing, screening, and remediating reading disabilities failed to attain its objectives. Yet the study concludes with the statement that there was an "upgrading of the district reading program." The implication from this type of finding is that there should be a conscientious attempt to match the attitude of the teacher with the program methodology.

The structure of teacher belief in terms of openmindedness is not significantly related to attitude toward structured or unstructured reading curricula. Furthermore, degree of traditionalism or progressivism did not seem to be related to negativeness or positiveness of observed classroom teacher behavior in a study of first grade reading.

The attitudes of kindergarten and primary grade teachers toward the introduction of reading curricula into the kindergarten year has been receiving a great deal of attention. In general, the early childhood

specialist opposes the inclusion of a formal program, whereas primary grade teachers are more likely to favor some form of reading instruction. Of 328 kindergarten teachers surveyed, less than half (144) thought reading should be part of the kindergarten program, but only 12 thought that kindergarten teachers did not need a course in reading methods.

Kindergarten teachers who favored reading instruction usually qualified their responses. They tended to emphasize the need to consider each child's readiness and to tailor the instruction on an individual basis. Teachers frequently expressed the feeling that parents put pressure on them to teach reading to children who, in the teacher's opinion, are not ready for such training. Opponents of reading instruction in kindergarten are more concerned with the child's total development and favor an experience-centered curriculum. Advocates of reading emphasize the child's need for challenge to counteract boredom. The conflict between these two positions is far from settled, but inasmuch as there is no clear evidence of harmful effects of early reading experience, there is a growing demand for instituting beginning reading in the kindergarten.

Another area which has received considerable attention during the past decade is the development of special reading programs for inner-city and ethnically-different children. The evidence as to the important impact of teachers' biases on the acquisition of academic skills will be examined in greater detail in the chapter on student attributes. But it should be noted here that many projects and research studies are particularly concerned with the problem of remediating reading deficiencies and disabilities of minority children. Throughout the literature it is clear that an appreciation of cultural diversity, perception of dialect as an acceptable form of communication, and above all, an openness to the

potential of economically disadvantaged and minority students, are essential for any successful reading program.

(Anderson, 1972; A plan to prevent reading disabilities, 1972; Askov, 1971; Ayllon, 1971; Bernstein, 1972; Davino, 1970; Clark, 1972; Ellis, 1971; Emeruwa, 1970; Guinet, 1971; Harris, 1970; Koenke, 1972; Mayes, 1972; Maynard, 1973; Moodie & Hoen, 1972; Mueller, 1973; Scherwitsky, 1974; Schubert, 1971; Sherwood, 1972; Vick, 1972; Weeks, 1972; and Winsand, 1971.)

Religious Education

Several surveys of the attitudes of teachers and principals to religious practices have been carried out and certain regional differences have been found. In general, southern and midwestern educators are more apt to favor religious teaching than western school personnel and parents. Data from one study of almost 1300 educators from Wisconsin and Ohio indicated that less than one-fourth of the respondents from Wisconsin agreed with the statement that each school day should start with a prayer, whereas almost 60% of the respondents from Ohio agreed. Conversely, almost half the educators in Wisconsin felt that religious education did not belong in the public schools, compared to only 18% of the Ohio educators.

For the total group of educators sampled, there was less resistance to non-specific practices, such as holiday celebrations. An increase in the specificity of the practice, e.g., bible reading or bible lessons, was associated with a decrease in favorable attitudes. Thus, bible lessons were thought to be appropriate in a public school classroom by only 3% of the respondents from Wisconsin and by less than one-fourth of those from Ohio. In both these States, less than 20% felt that prayers over food were appropriate.

There is a definite trend, not entirely due to but undoubtedly hastened by recent court decisions, to decrease religious practices in public school classrooms, and to secularize the observance of national religious holidays. School boards and principals tend to avoid issuing any official guides or instructions. Thus, the teacher actually has a much greater say in deciding how much (prohibited) religious activity is actually carried out than the hierarchical school system structure would indicate.

Of the large proportion of educators who favored religious education, it should be noted that many of them included under this rubric non-sectarian prayer and the study of religion as a cultural or literary subject. In effect, there seems to be an endorsement of a need for moral and value reinforcement, rather than a specifically deistic bias.

In a study of values instruction in a Colorado school system, almost the entire faculty surveyed felt that schools should be concerned with values. Over 80% of the respondents felt that values were relative rather than absolute, and they did not feel that the school should decide what values to inculcate. Rather, the majority of the teachers felt that teachers, students, and community should jointly determine what values should be taught, and that the teachers should be responsible for how they were taught.

Over three-fourths of the teachers reported that they had never had a class or workshop that dealt specifically with values education, nor did they have any published materials or literature to use if such a curriculum were to be established. Many of the respondents felt that they would like to have some sort of in-service or workshop training to help them provide children with a background in broad moral and ethical principles.

(Kay, 1973; Longstreth, 1970; and Reich, 1971)

Science Education

In his review of the teaching of science, Watson (1963) was greatly concerned that the whole realm of affective behavior had been sorely neglected in the research literature. He attributed a major source of this neglect to the fact that science educators had been focussing on the achievement test performance of the student, involving recall and recognition behaviors and the application of memorized principles to academic-type problems. While the acquisition of such skills is an important educational outcome, the emotional-motivational impacts of instruction are far more significant and lasting. There are numerous reports of great science teachers who have influenced students to select careers in science. The other side of the coin, the unknown and unknowable numbers of potential scientific geniuses who have been lost to this field by inappropriate teaching, should be of even greater concern.

Prior to 1963, only a handful of investigators were interested in determining the criteria of successful science education, and how these were related to the characteristics of the successful science teacher. Even in these studies, affective variables such as teacher warmth and intrinsic motivation were inferred from student descriptions of teacher behaviors. The single exception is the comprehensive investigation of teacher characteristics carried out by Ryans (1960). Although these studies had not, as Watson put it, "penetrated the facade to the real teacher," they did offer some suggestive leads to further research. One report, which compared liberal arts science majors in terms of those who elected to teach science rather than to follow a science career, indicated that the teachers were significantly more social, more emotionally stable, and had better personal relationships. This does not, of course, say anything about how science teachers compare to teachers of other subjects. Ryans' data revealed that

science and mathematics teachers were the most conservative teachers in the school system. The early studies also indicated that, to a significant degree, the teachers' behaviors could be predicted fromtheir personality characteristics. Furthermore, variances in student behaviors could be attributed to differences among teachers. Many instruments to assess scientific attitudes have been developed. (For example: Ackerson, 1970; Bratt, 1973; Clark, 1970; De Groote, 1972; Lee, 1971; Moore, 1972; Pempek, 1971; Peruzzi, 1972; Rose, 1971; Shanks, 1969; Shrigley, 1973; Stevens, 1972; and Weinhold, 1970.)

These have been administered in a number of contexts. One area of interest has been comparison of the personality and behavior of teachers of science and non-science subjects. The differences between science and humanities teachers in the high school has been attributed to a "two-cultures gap," characterized by an apprehension about the need to be well informed in both cultures (Clark, 1970). Science teachers have been found to be generally more reserved, calm, and mature, and appear to be more serious and taciturn. They also tend to be more self-sufficient and resourceful than other subject-matter teachers.

Among science teachers, females were more outgoing and warm-hearted, while males were more tough-minded, self-reliant, and realistic. (Main, 1971) A study of the characteristics of female science teachers indicated that those who did best on a concepts-of-science test possessed an analytical, cognitive style, and were described as "goal-oriented, self-directed women with firmness of character, and above average intelligence." On the Strong Vocational Interest Blank, these teachers were seen as being "impatient, stubborn, demanding, imaginative,and more emotionally insecure" than those who scored low on the concepts test. The latter group were described by the SVIB as "serious, sincere, industrious, responsible women

manifesting a conservative life style." (Shanks, 1969)

It may very well be that high scores in science content are not the best bases for selection of female science teachers. Other studies exploring the relative importance of science knowledge, as contrasted with enthusiasm and personal relationships in the classroom, support the position that these latter affective variables are more significant in science teaching than the teacher's cognitive level. (Brown, 1974; Bybee, 1972; Christiansen, 1971; Edgar, 1973; Hinde, 1971; and Shrigley, 1974.)

Many of the recent studies have been concerned with the pre-service attitudes of prospective science teachers, and the effects of different types of methods courses. Lecture-demonstration methods have been compared with auto-instructional methods (Liddle, 1973) and process questioning methods with skill instruction (Grunau, 1973). Traditional methods have been contrasted with various innovative techniques such as conceptually-oriented program (Graeber, 1972), a modern science curriculum approach (Bratt, 1973), and micro-teaching (Rose, 1971; Staley, 1970). A consistent finding across these studies is that humanistic, experimental questioning approaches are more apt to produce students and teachers with these characteristics. Furthermore, there is a definite gain in positive attitude toward the teaching of science. Courses designed for the preparation of science teachers should incorporate these features. However, pre-service training experiences cannot be expected to affect basic personality characteristics, and it is easier to change behavior than attitudes. (Cook, 1971)

Supervisory personnel have surprisingly little impact on their trainees' attitudes. While the attitudes of the prospective science teachers moved significantly away from those of their university science professors after the student teaching experience, they did not become significantly more like their supervising teachers. (King, 1970) The

supervisory style of the science department head was likely to affect the attitude of the science teacher toward the supervisor, but not toward the teaching of science. Those who emphasized individual expectations were regarded more positively than those who emphasized institutional expectations. (Peruzzi, 1972) No significant differences in teacher attitudes toward an innovative biology curriculum were related to the principal's positive or negative feelings about the program. (Lee, 1971)

With the introduction of the new science curricula, and the increasing interest in affective variables, many researchers have investigated the impacts of different types of programs, e.g., Science - A Process Approach, or Science Curriculum Improvement Study (SCIS). Certain teacher personality characteristics were related to teaching effectiveness, but these were not significantly affected by any of the different types of curricula. On the whole, there is little reliable evidence of meaningful teacher attitude changes solely on the basis of the innovative program adopted. (Bruce, 1971; De Groote, 1972; Harty, 1970, 1973; Hovey, 1970; Jenkins, 1971; Kennedy, 1973; MacKay, 1973; Moore, 1972; Pempek, 1971; Stevens, 1972; Uffelman, 1972; and Wallace, 1971.)

Some interesting findings have been reported in studies of the relationship between teacher attitudes and the innovative Biological Sciences Curriculum Study (BSCS) program. Clark (1971) reports three surveys of teacher attitudes, and includes a bibliography of references to BSCS materials published between 1969 and 1971. Although teacher attitudes are not consistently related to student attitudes, teachers' perceptions of the classroom climate or school esprit correlate significantly with biology laboratory practices and activities. (Ackerson, 1970; McNeill, 1971)

Teachers who are strong advocates of the use of experimentation in science classes are more likely to have students who receive high scores

on tests of both science facts and understanding. The results of the Driver (1969) study indicate that "open-minded experimental-prone biology teachers consciously or sub-consciously create an atmosphere more conducive to learning science than teachers without strong beliefs toward experimentation." This conclusion is supported in the work of other researchers. (Cf. Amos, 1970; Hoy and Blankenship, 1972)

Increasingly over the past few years the study of earth science, ecology, or environmental science, is being added to the science curriculum. Clark (1971)notes that most students in New York, New Jersey, Pennsylvania, and Maryland study ecology from one to four weeks in 10th grade biology. Fifty-two percent of the teachers sampled said that they planned to introduce some type of environmental science course.

The effects of several environmental science courses have been reported in the literature. Teachers generally have positive attitudes toward such programs, but their inclusion does not alter the teachers' attitudes toward science teaching. High scores on the MTAI demonstrated a higher degree of motivation and control. On the Flanders interaction analysis, they significantly more often extended the use of the students' ideas.

Although the total score on the MTAI has been questioned since it confounds several independent variables, if these relationships are valid, the instrument would provide a useful tool for selection of teachers for new earth science courses.

(Exline, 1974; Hulleman, 1972; Imperatore, 1970; Leith & Butts, 1974; Orgren, 1973; and Roth, 1971.)

Sex Education

Sex education as a regular course of study in the public school has had a long and stormy history. Even today there are many areas of the country where the very prospect of such a course is sufficient to raise the hackles of parents and educators alike. Results of a survey of all practicing teachers and administrators in the Arizona public schools indicated that the lack of agreement on crucial questions such as who should teach the course, and what the content should be was an important impediment in the development of workable programs. (Haggerson & Cohen, 1971) But there is a strong feeling among educators that some form of sex education is needed. (Klingele, 1973; Schuck, 1972)

One way of decreasing opposition to the inclusion of this subject matter in public education is to call sex education "Human growth and development," or to include the content in an omnibus approach to "Family life education" which focuses on social relationships. Under this rubric would come problems associated with alcohol, tobacco, and drug use, as well as those of sexual behavior.

It is quite understandable that most teachers attempt to avoid value questions and controversial issues. It is equally evident that students need help on personal problems. Thus, there is a clear need to involve all the community resources in planning and developing appropriate programs. Teachers have identified the need to synchronize the program within a grade level, and to coordinate the sequence from one grade to another. They also express the need for in-service training programs and workshops. A report of one such in-service workshop, a three-year project involving 515 teachers of 1,110 students, did bring about a significant gain in teachers' knowledge of course content and a significantly more positive attitude toward teaching sex education courses. There was not, however, any significant change in basic personality characteristics. (Fretz & Johnson, 1971; Ojemann, 1969; Stone & Schwarz, 1972; and Wendland, 1972.)

Social Studies

The curriculum area most susceptible to influences of teachers' attitudes and characteristics is probably that of social studies. Under this topic are included issues of historical interpretation, political and economics questions, citizenship education, and all the disciplines attempting to deal with human beings in their myriad forms of social institutions. Yet, despite the close connection between teacher perceptions and beliefs and the content of the social-behavioral sciences, comparatively little research focuses on the impact of this specific relationship.

According to Metcalf (1963) there were three major summaries covering the research literature on teaching social studies. One of these (McLendon, 1960) was part of the What Research Says to the Teacher series. All three bibliographers, and Metcalf as well, found the field broadly and vaguely defined, with no systematic or theoretical basis for organizing and interpreting the substance of the discipline.

A major problem plaguing social studies teachers is the tremendous proliferation of objectives. An early investigation (Horn, 1937), cited by Metcalf, identified 1400 objectives in the American History course alone. One junior high school course of study began with a 47-page listing of objectives. Metcalf, reporting the work of Wesley and Griffin in this area, notes that Wesley adopted Charles Beard's suggested listing of nine skills, seven habits, eleven attitudes, eight qualities, and a separate category called "information." To this, Wesley added 17 objectives of his own for history, and another 36 to be shared with economics, geography, civics, and sociology.

Even more cumbersome than their quantity is the nature of the objectives. Wesley's list included a preponderance of non-behavioral objectives

such as: "to develop an appreciation of our social heritage," "to acquire a perspective for understanding contemporary issues," "to develop a love of historical reading," and, "to promote international understanding." As they moved toward more numerous and even more grandiose objectives, social studies educators seemed to be taking on the responsibility of all the affective-motivational goals of education, as well as such amorphous but critical process goals as "critical thinking", and "problem solving." With all this concern for affective behaviors, there has been almost no attention to the role of teacher beliefs and attitudes toward the content or methodology of social studies instruction.

The tendency to broad-ranging objectives persists in the recent research, but there has been some attempt to examine the relationship of teacher perceptions to classroom behavior and student outcomes. Along these lines, one study divided a group of high school social studies teachers according to whether they attached high or low value to the learning of specific skills. Although the skills orientation of the two groups differed significantly, all the respondents agreed that the most important social studies skills were"the ability to distinguish between fact and opinion, to discriminantly read newspapers, magazines, and pamphlets, and to apply problem-solving and critical thinking skills."

In line with current emphases toward greater involvement of parents and community in schooling decisions, studies have attempted to determine the congruence of attitudes toward content of social studies courses. The consensus is that such decisions cannot be the prerogative or responsibility of any particular reference group, but must be arrived at through cooperative action.

Across a variety of studies, teacher personality, attitudes, and

professional and academic background have demonstrated little consistent effect on social studies teaching. In one investigation, teachers who scored high in dogmatism, and those who had less than five years teaching experience, tended to take a more moderate position on controversial issues. Although the 143 teachers sampled were from diverse cultural backgrounds (Michigan, Texas, Mexico, and Guatemala), clarification of this ambiguous finding would be deseriable before wide generalizations are made. (Guenther, 1973; Kardatzke, 1968; Raths & Fanning, 1971; and the Social Studies Inventory, 1970.)

A number of investigators have been interested in studying the effects of different types of training and levels of subject matter knowledge on the performance and attitudes of prospective social studies teachers. For example, in one study (Waimon, 1971), 10 teachers, given a total of six semester hours of an experimental microplanning, microteaching, and clinical teaching course, were compared with an equal number of matched peers who took the regular six-semester-hours methods course. The experimental group obtained higher scores in teacher effectiveness, as evidenced by student performance on a two part test of recall and reasoning. In addition, there was no adverse change in attitudes toward students or teaching after the experimental training. The resistance of attitudes to change as a result of a short experimental treatment was also demonstrated in a similar type of study, but one involving an inquiry-method of instruction. Here, too, the teachers changed their teaching behaviors but not their attitudes. (Baker, 1969)

Attitudes of teachers, clearly relevant in the teaching of social studies to children from economically disadvantaged or ethnically different families, have been examined by a number of researchers. Not unexpectedly, teachers hold many of the same ethnic-racial stereotypes as the general

population. Courses to modify such attitudes are effective in increasing knowledge about minority groups and different cultures; they may also assist in the development of more appropriate teacher behaviors. There is, however, a recognition that teacher attitudes are the products of years of social indoctrination and cannot be effectively modified in short sensitivity sessions or cultural awareness workshops. This does not mean that educators should take a defeatist position, but that they must face the fact that long term interventions will be needed. (Banks & Joyce, 1971; Ferguson, 1970; Gitlitz, 1973; Swick & Lamb, 1972; and Wade & Davenport, 1973.)

Another area which has generated a considerable number of research efforts is that of innovative curricula in the social sciences. New programs such as "Project Insight," "Man: A course of Study," and, the "New Social Studies (NSS)," tend to emphasize the use of inquiry techniques, with a concomitant deemphasis on rote learning of isolated bits of information. Professors in the social science disciplines seem far more satisfied with these new approaches than are teachers of social studies methods courses. The latter group is unhappy with the strong developmental emphasis. The feeling is that NSS is overly academic, cerebral, and teacher-centered. Methods teachers would like to see more responsiveness to student interests, community activities, and social action.

Similar pressures for increased community and student involvement are also evident in citizenship training. It has been pointed out that students receive messages about citizenship from all members of the school's teaching staff. Educators who are bigotted, who do not insist on enforcement of school regulations, who provide few opportunities for student participation in classroom decisions, seriously impair the capacity of the school to do an effective job in teaching citizenship. It is the school

administrator's primary responsibility to incorporate citizenship training in every facet of the school's programs and activities. Teacher preparation for implementing this approach is inadequate, and the selection of textbooks is limited and out-dated. Although most teachers consider themselves qualified to teach the civics course, they feel that more political science courses with more practical applications should be required for teacher certification.

(Besel, 1970; Carswell & Kurfman, 1971; Exemplary student government program, 1968; Highsmith & Lewis, 1971; Horsley, 1971; Jones, 1974; Naylor, 1973; New Jersey Social Science Teachers, 1973; Peckham & Ware, 1973; Tucker, 1970; and Winn, 1971.)

Vocational Education

The passage of the federal Vocational Education Act in 1963 gave an unprecedented impetus to the improvement of vocational education throughout the country. Later,when the ERIC system was established, one of the Clearinghouses was devoted to vocational education and training. More recently, a Clearinghouse on CAreer Education was added to the network. (Incidentally, this may reflect an effort to upgrade semantically the status of non-academic courses.)

Each year since 1967, quarterly compilations of Abstracts of Research and related Materials (ARM) bring together thousands of articles in this area. By 1972, at least 30 states had initiated special vocational education programs. Self-studies of 39 projects were available in 10 of the USOE Regional Offices. (Morgan, 1972) For the current review, this voluminous body of material was culled for only those studies which had some concern with the role of teacher attitudes, either directly or indirectly.

In a survey of attitudes of vocational educators toward a more uniform nationwide curriculum, responses were received from 130 of 150 selected industrial arts department chairmen of colleges and universities, from 36 of the 50 state industrial arts supervisors or consultants, and from 194 of the 220 high school industrial arts teachers. While agreeing to the need for a common core of learning experiences, there was strong opposition to any terminology that hinted of a "standardized" or nationally-controlled curriculum. The educators in all three categories felt that a primary concern should be the establishment of flexible curricula responsive to local needs and diversity. This inclination toward self-determination is reflected in the wide variety of approaches among the reports of State programs listed here. There are, however, certain threads which run through all these reports. The first is

the recognition of the need for improvement in vocational education, and particularly the need for more positive attitudes of elementary teachers toward blue-collar employment. Where workshops or in-service programs were presented, the effects were invariably positive, with attitudes of upper grade teachers showing greater improvement than those of primary grade teachers.

(An occupational V-E model for the State of Delaware, 1973; A research study in development of effective means of altering attitudes of elementary school teachers toward V-E, 1972; A statewide evaluation of VIEW, 1972; Bisbee, 1973; Bobbit, 1971; Career Study Centers, 1971; Carter, 1970; Den, 1973; Eaddy, 1971; Handley, 1973; Krueck, 1972; Mitchell, 1972; Mobile County and Phenix City project in career education, 1973; Pinson , 1971; Project EVENT, 1969; Second Report of the Washington State Advisory Council, 1971; Shoemake, 1972; Smith, 1973; Thomas & Jackson, 1972; Viterna, 1971; and Wright, 1973.)

These State-oriented efforts frequently overlap with studies addressed to specific subject areas. In business education, one particularly troubling problem is that traditional commercial subject teachers are not equipped to teach elementary reading and arithmetic skills. They usually assume that 15 - 18 year-old business education students have already acquired these abilities in the early grades. This is frequently not the case, especially with students from disadvantaged backgrounds. Although business English and business arithmetic have always been part of the commercial curriculum, the texts and approaches used for these subjects are not appropriate for the student who reads at a third or fourth grade level and who lacks skills in simple computation.

As in other subject areas, a positive teacher attitude toward business education courses is no guarantee that students will learn more effectively.

Young (1973) demonstrated that teachers could be taught to alter their teaching behavior so as to exhibit greater enthusiasm when teaching; but this did not significantly affect the students' learning of the subject matter.

Courses in distributive education are relatively new among vocational curricula. Several studies have attempted to determine the educational backgrounds and beliefs of teachers who enter this field. In one such investigation, approximately one third of the teachers had had business education courses themselves. Of this group, slightly less than 90% expressed a strong preference for teaching distributive education. A study comparing three methods of conducting visitation conferences in cooperative distributive education programs provided evidence that there was a need to improve both employer and teacher attitudes toward this vocation. (Doneth, 1970; Riley, 1970; and Traicoff, 1967.)

Another relatively new field encompasses the biological and agricultural occupations. Special workshops have been designed for science teachers to increase their awareness of the new career opportunities. Such workshops are often successful in recruiting teachers for new vocational programs, or influencing them to include vocationally-slanted materials in the regular science courses.

Because of the relative novelty of this area, there is still a good deal of disagreement among experienced and pre-service teachers as to the legitimate substance of agricultural education. Conservative attitudes toward this type of course seem to be retarding its full development and usefulness. A four-week intensive experimental program for agricultural occupations teachers provided organized in-service instruction and on-the-job occupational experience in agricultural establishments. Representatives of the latter groups participated in the evaluation. The overall reaction to the program by the teachers and the businessmen ranged from good to excellent. The consensus was that agricultural education should continue to

develop and to offer short-term in-service education opportunities. More emphasis should be placed upon developing instruments to evaluate new and innovative programs in agricultural education.

There is a strong relationship between industrial arts and environmental education. A qualified jury selected 53 concepts, which were then categorized by 313 industrial arts teachers. The objective was to determine which concepts should be taught as a separate course within the industrial arts curriculum, and which could be incorporated in traditional vocational courses. It was found that 52 of the 53 concepts were appropriate in courses such as metals, graphic arts, plastics, drafting, power, and woods. In essence, the feeling was that more environmental concepts should be taught in these regular vocational courses.

Carpentry, one of the oldest of the vocational specializations, is also being given a new look. A survey of 122 industrial arts instructors was carried out to determine what content is most frequently covered in traditional wood-work shop, and what concepts or skills are not, but should be. With reference to the first question, the most frequent topic emphasized was that of safety. Then came tool identification, adhesives, abrasives, lumbering, wood identification, and board feet computation. Cabinet making and furniture construction received the major emphases. Most instructors felt that the study of wood, its industry and its products, were not receiving sufficient attention, and that the learning experiences of the wood project should be modified. A consensus of instructors felt that wood technology would become a major course offering in the training of vocational arts teachers.

It is interesting that none of the investigations reviewed for this report have addressed the question of sex discrimination in vocational education. Historically, this field has been most guilty of sex stereotyping, and

most resistant to change. Clerical and secretarial courses, home economics, and nursing have traditionally been subjects open to girls. While they have never been formally closed to boys,they were considered "sissy" subjects. No "real" boy would be caught dead in a cooking class! On the other hand, girls were never admitted to carpentry or auto mechanics shops, or the many other industrial arts specializations considered traditional male occupations.

Home economics teachers are becoming more oriented to the career opportunities inherent in child care, food service, and clothing and fashion design. The traditional emphasis of home economics for homemakers, hence girls only, has been changing radically. More boys should be encouraged to enter these classes and to become aware of the vast array of work opportunities inherent in these skills.

(Bowden, 1972; Cauley, 1971; Coleman, 1971; Combs, 1974; Mannebach, 1969; Russell, 1972; and Thomas, 1973.)

Just as in other subject areas, the attitude of the teacher to the subject matter taught is extremely critical. Rather than attempt to assess the effects of such attitudes on students, however, most of the studies are concerned with comparisons of attitudes of vocational teachers with those of other groups. Since vocational teachers are often recruited from the vocations themselves, many of them do not have academic degrees. The question then arises as to whether differing amounts of formal academic education have any effect on attitudes toward the teaching of vocational subjects, or achievement gains of the students.

A group of 149 industrial education instructors in community colleges, secondary schools and skill centers, including a number who had 25 or less hours of professional preparation, some with 25 or more hours but less than a B.A. degree, and some with college degrees, completed an industrial

teacher attitude inventory. Data from this instrument indicated that there were no significant differences in attitude related to academic background. Non-degree teachers received a better rating by students than did teachers with a degree. Instructors with more than 24 hours of preparation but less than a baccalaureate degree had more positive attitudes toward teaching than did the other groups. (Pfahl, 1971)

Another type of comparative study was carried out to determine whether there were any differences between those who elected to remain in a particular vocation and those who decided to teach their skills to high school students. Members of both groups completed the MTAI plus three instruments designed for this study: a role perception scale, a study of values, and a survey of interpersonal values. The entering teachers were then given a two-week preservice teacher preparation course on role perceptions for vocational teachers. The only measure on which significant differences were found was the MTAI. Not surprisingly, those who elected to enter the teaching profession had significantly higher positive attitudes toward teaching than those who elected to remain in their vocations. (Capelli, 1973)

Data from a Vocational Needs Assessment (1972) indicated that high school students generally lacked vocational information and were not certain about college or career plans. They expressed a desire for help in career planning but were given little guidance by their high school teachers. Vocational teachers gave very positive support to the vocational curricula, while non-vocational teachers were less unanimous. Students and both groups of teachers felt that parents should be better informed about the values of vocational studies. As a result of the survey, it was recommended that appropriate curricula be provided for non-college-entering students. Planning for career awareness and vocational education involves both teachers, students, and parents. There should be improved communication between the home and the school.

Attitudes of people generally toward vocational education have been explored. For example, Gilliland (1967) compared the attitudes of educators, students, and parents in slum, suburban and cross-sectional areas toward blue collar occupations and vocational education. He also attempted to determine the effects of union or non-union affiliation and levels of intelligence on attitudes toward vocational education. The data indicated that, within socioeconomic categories, educators had the most favorable attitudes, parents slightly less, and students themselves held the most negative attitudes. Across economic groups, however, parents and students had the most favorable attitudes, while academic teachers and administrators were slightly less favorable than were the practical arts teachers. Union respondents were more favorable than were non-union respondents to vocational education. Finally, it appared that people with higher general intelligence were more favorably disposed to this field than were those with lower intelligence.

Since the work cited above, there has been a considerable reorientation to the entire field of vocational education. Preparatory to the installation of the Comprehensive Career Education Model, a survey of students, staff, and parents in six particpating local education agencies in California was carried out in 1972. All the respondents reported an extremely positive attitude toward career education. The only source of disagreement concerned the granting of course credit for work experience. Parents did not approve of credits for job experience whereas teachers felt that such course credit would be appropriate. (Brickell & Aslanian, 1972)

Change orientation of vocational teachers has been related to other personality variables. To identify potential innovators and teachers most receptive to change, 250 vocational teachers were classified as "early

adopters" or "laggards." All the teachers were asked to respond to an instrument containing eight subscales designed to measure change orientations. They were also given a short form of the Rokeach Dogmatism Scale, the Rotter Internal-External Control Scale, the Dye Local-Cosmopolitan Scale, and the McClosky Conservatism Scale. Early adopters and laggards differed significantly in five of the eight attitude scales. Factor analysis identified 21 items for a general factor scale, which was a powerful discriminator between the groups. The basic finding was that teachers with high change orientation scores were less dogmatic, less conservative, and more cosmopolitan. They also had over twice as many unusual or unique features in their instructional programs. (Russell, 1972)

Other studies of personality variables of vocational education teachers reveal similar findings. (De Witt, 1973; McKee, 1971; Patterson, 1971; Riggs, 1972; and Robinson, 1971.)

CHAPTER III - MINORITY POPULATIONS

Probably one of the most significant features of the great War on Poverty initiated by the Johnson administration in the middle '60's was the focus on improvement of education. Most of the federally-funded education projects growing out of this effort have built-in requirements for evaluation to determine program effectiveness. As a result, there are innumerable reports of interventions funded under Title I, the Elementary and Secondary Education Act (ESEA), Title III, Career Opportunities Program, Right to Read, Emergency School Assistance Act Program (ESAP), Title VII, and a variety of other legislative actions. In almost all of these, there is some concern with the attitudes of the teachers involved in implementing the program. With comparative studies, attitudes of teachers in the "control" or non-intervention classes are also surveyed. An early review (Levan, 1968) cites almost 200 references on teacher attitude change.

There are many other investigations which relate to attitudes of teachers toward the education of minority students. Stone (1969) reports on 25 projects concerned with training teachers for work with disadvantaged children. Both the ERIC Clearinghouse on Teacher Education and the Clearinghouse on the Disadvantaged have prepared annotated reviews of research, sometimes on a yearly basis. Mathieson & Tatis (1970) have published a resource guide for teachers and teacher educators. Mathieson (1971) reviews literature on problems encountered by beginning teachers in the inner city, and points out some steps that have been taken in both pre-service and in-service teacher education to alleviate these problems. In 1971, Jayatilleke prepared an annotated bibliography (updated in 1972 and 1973) of human relations in the classroom. The items reviewed focus on issues of race

relations and racial attitudes. Of particular interest here are the sections on teacher attitudes, and the research directed to changing teacher attitudes and classroom behavior.

As might be expected, many doctoral candidates in the latter half of the last decade found issues dealing with the teaching of disadvantaged and minority populations particularly relevant dissertation topics. To make findings of such investigations more readily accessible, the ERIC Clearinghouse on the Disadvantaged has initiated a Doctoral Research Series. The first issue in this series (Jablonsky, 1973) covers dissertations from 1965 to 1972. The scope of the dissertation literature may be inferred from the fact that the Venditti & Hall (1972) survey of unpublished doctoral research studies completed in the College of Education at the University of Tennessee alone includes over 22 items.

The primary target of this effort is here identified, for want of a better term, as the "Minority Populations." Under this rubric are subsumed poverty populations of many different ethnic groups. It includes Caucasian children in Appalachia as well as other rural and migrant groups. Unfortunately, however, most of the poverty families in the United States are Black, Chicano, or Native-American (Indian). Thus, experimental studies and evaluations of compensatory programs have never been able to disentangle the effects of poverty from those of ethnicity or race.

It would be impossible to provide here a complete review of all the literature in this field. For heuristic convenience, compensatory programs, generally, are discussed in the first section. The second section is concerned with pre-service and in-service programs which are directed specifically to changing the attitudes of teachers toward poor and ethnically-different peoples. Effects of teacher attitudes toward minorities as they

affect their expectations or instruction of children in the classroom are not discussed here but are treated under the heading of Ethnicity in the chapter on Student Attributes.

Several major institutional changes have occurred as the result of the effort to improve education for disadvantaged minority children. Court-mandated bussing and integration continue to have traumatic impacts on schooling; witness Boston, December, 1974. A third section of this chapter considers how bussing and integration have affected teacher attitudes. This is followed by a fourth section which looks at the effectiveness of various types of interventions in producing more favorable attitudes toward integration.

Compensatory Education

Compensatory education has three major foci: reading, mathematics, and bilingual education. Across all such programs there are certain common characteristics: a) enrichment of facilities and materials; b) innovative patterns and use of personnel; c) curriculum revision; d) teacher training; and e) evaluation.

Intervention programs are usually installed in ghetto schools which have traditionally been deficient in even the necessities of instruction, such as chalk, pencils, paper, and textbooks. Thus the foremost feature of federal funding is the provision of these supplies. In addition, and determined by the nature of the intervention, are purchases of materials specific to certain programs, audio-visual equipment, learning centers, and libraries.

A second essential characteristic of the compensatory program is the opening up of the traditional, autocratic classroom structure. Perhaps the most revolutionary change in recent educational practice has been the introduction of the paraprofessional, as volunteer parent or paid teacher assistant, into the classroom. Many programs associated with the compensatory movement have been developed to provide training for community personnel. These programs have often up-graded participants, for example, through the CAreer Opportunities Program, to the point where full teacher credentialling has become possible. Compensatory programs have also increased the involvement of a variety of subject matter specialists. Additionally, parents and community have demanded a greater share of decision-making on educational and curricular issues. In effect, the autonomy of the classroom teacher has been assailed from several directions.

Curriculum revision takes two basic forms: a) innovative content or b) innovative procedures. Thus, there may be new arrangements of subject matter materials, or new curricula which follow traditional discipline-oriented

patterns. There are also the structural changes such as are implicit in team teaching, cross-age tutoring, or open classroom organization. Individualization of instruction, focus on child-centered vs. content-acquisition, and introduction of behavior modification procedures, may involve changes both in content and structure.

An integral part of every innovative program is the provision of in-service training institutes and workshops to develop the new skills and orientation required for the implementation of the program. This type of experience is particularly essential where basic attitudinal changes must be made. In addition, training objectives include improvement of teacher skills in verbal interaction, application of principles of positive reinforcement, development of behavioral objectives, and self-evaluations of micro teaching and videotaped episodes.

The fifth common characteristic, the need to evaluate program effectiveness, provides the basis for the formative assessment and comparison of the various types of compensatory programs. Unfortunately, there are many serious problems which make it almost impossible to design evaluations which can satisfy rigorous experimental criteria. To begin with, the objectives of many interventions are framed in terms of affective, emotional or motivational changes. For two important reasons, the majority of evaluations rely primarily on pupil performance on standard achievement tests. First, there are almost no valid measures of affective behaviors. Second, and even more important, is the fact that most school systems, whatever broad, humanistic goals they may espouse, invariably translate these in terms of acquisition of basic skills in reading and math.

The most serious interference with valid assessments, however, are attributable to purely operational problems. The high mobility of students

in compensatory programs frustrate long-range longitudinal studies, yet these are the most meaningful assessments of program impacts. Moreover, it is usually impossible to find an equivalent population which has not been subjected to some type of intervention, hence control group designs are completely unfeasible. Further, there are the experimenter's plagues of diffusion, lack of program continuity (due to teacher strikes, failures of tax-overrides, unpassed bond issues, etc.), and lack of control over teaching and testing procedures. All these problems lead to the researcher's nightmare: no significant differences.

As a result, the need for evaluation is often satisfied by a melange of subjective testimonials overlaid across meager statistical data. In general, there is little evidence that any one curricular approach is more effective than another. In the primary grades, teachers seem to have more positive attitudes toward child-centered approaches, yet structured, academic programs produce greater improvement in scores on academic achievement tests. Teachers with classroom aides have a more positive attitude toward the teaching of disadvantaged children than those without aides.

Adding more than 100 minutes per week to reading instruction is favored by only one-fourth of the teachers in the program. The increase in structured reading lessons does not change the attitude of students toward reading, neither positively nor negatively. (The latter finding may surprise many humanistically-oriented educators!) Finally, there seems to be general consensus, though no hard data, that teacher morale, commitment to program, and attitude towards children are the critical variables in any type of educational intervention.

(Bernstein, 1972; Cecil, 1971; Final Report of the 1970-71 Group I Guidance, 1971; Forster & Carpenter, 1973; Idleman, 1973; Jacobs & Felix, 1970; Leonard & Gies, 1972; Longitudinal evaluation of selected features

of the national Follow Through Program, 1971; Neff & Ahlstrom, 1973; Rodriguez, 1973; Stern, 1974; and Willis & Noe, 1973.)

Changing Teacher Attitudes toward Minority Populations

After reviewing almost 140 research studies, Mathieson (1971) concludes that the most important ingredients for successful urban teaching are the attitude of the prospective teacher, and early, extensive pre-service experience with the realities of the inner city. What are these attitudes and experiences which make for an effective teacher of the disadvantaged? Jablonsky (1972) surveyed 59 teachers who were identified by their principals as being exemplary. One set of criteria related to general personality traits, relationships with peers, children, parents and community, and the curriculum.

A second set of criteria were related to characteristics which were effective with minority children. These included issues of teacher's expectations of pupil behavior and motivation, self-concept, and physical, social, and psychological environment, as well as beliefs about poverty, racism, bigotry, welfare, and family organization. The model teacher was described as "charismatic, compassionate, intelligent, emotionally mature, hard working, highly creative, and knowledgeable." Such a teacher would also be able to get along with parents from different ethnic and socioeconomic groupings, have high expectations for achievement of students, and formulate appropriate demands for the fulfillment of these expectations.

Because of the presumed importance of these characteristics, a great many programs have been designed to instill favorable attitudes toward minority populations in teachers who work with these children. Intervention programs are generally either for persons taking pre-service teacher training courses who express an interest in working in inner city schools, or for those who need in-service training to become better teachers in this special setting.

A number of studies have demonstrated that student teachers who elect to work with disadvantaged children already possess many of the desired

characteristics. After appropriate training programs, affording opportunity to work with these children, attitudes of such candidates tend to become more realistic but remain favorable. It is therefore recommended that schools of education give more careful attention to the selection of teacher trainees. Screening should be based on appropriate attitude inventories since it is difficult to establish any reliable relationships between demographic variables such as sex, race, socioeconomic background, parental educational levels, and previous experience in a disadvantaged community, and potential for becoming a successful teacher of the disadvantaged.

Pre-service training programs may be of several types. They may involve dynamic group processes, sensitivity sessions, acquisition of information about minority cultures, participant observation in classrooms in inner city schools, and teaching experiences in such classrooms. Some experimental programs have given pre-service assignments involving living in the community, even in homes similar to those of the students. These components have been explored separately, as comparison treatments, in various combinations, or as "total immersion" programs. Inquiry teaching methods are usually emphasized and there is an attempt to reduce the authoritarian role of the teacher in the classroom.

There are consistent data demonstrating that informational programs do produce gains in knowledge about culturally-different people, but there is no evidence that these gains are necessarily accompanied by modification of prejudicial attitudes. Although many of the pre-service programs report positive pre-post attitudinal changes, these do not usually hold up in experimental studies which include control groups having so-called "traditional" teacher training experiences. This has led many researchers to question the value of the far-more expensive "immersion" programs. In addition, there is also some evidence that short-term exposures

to poverty situations may result in culture shock, with accompanying negative attitudes.

An important objective of special pre-service programs for teachers of disadvantaged children is to decrease the considerable rate of teacher attrition in the inner city schools. This objective was not achieved in any of the studies reviewed for this report. Although 80% to 90% of the student teachers took jobs in inner city schools, most of them had left at the end of three years. Those who did remain, however, felt that their pre-service training had been extremely helpful.

(Baker, 1973; Barnes, 1973; Bestal, 1971; Burlando, 1970; Clark, 1971; Coopersmith, 1973; Cuban, 1969; Dudley, 1970; Eubanks, 1973; Gibboney, 1970; Grey, 1973; Hubble, 1972; Kerr, 1973; Laughery & Kittleson, 1973; Leslie, Levin, & Wampler, 1971; Mazer, 1969; Needham, 1973; Proppe, 1972; Pugliosi, 1973; Ross & Swick, 1969, 1972; Shoudel, 1972; Simmons, 1973; Soptick, 1973; Staiert, 1972; and Swick, 1973.)

Up until quite recently, assignment to teach in an inner city school was tantamount to being sent to Siberia. It was a punishment meted out to beginning teachers without influence, and to tenured teachers who had committed some gross breach of conduct, but who could not be dismissed because of their years of service. Teachers in inner city schools were notoriously the least experienced and the least competent in the local school system.

The first line of attack, in the push to improve the education of ethnically-different and poverty children, was to upgrade the skills of their teachers. There was the introduction of new subject matter curricula such as modern math, and many new reading approaches. There were also vast experimental programs, such as Follow Through, which involved not only a

variety of new reading and math curricula, but also new organizational structures. These included team teaching, open classrooms, individualization, and increased employment of non-credentialled personnel in classroom teaching roles. All of these required the retraining and reorientation of the already experienced teacher.

In addition, large groups of teachers were suddenly faced with classrooms where a good proportion of their students were bussed in from deprived, minority neighborhoods. Or they themselves may have been forcibly uprooted from their safe, comfortable settings in middle-class schools and, by court mandate, assigned to teach children with whom they had no rapport, and in unfamiliar, threatening school environments. It was not surprising that these conditions would bring out hostility and negative attitudes, even in teachers who may have held neutral "liberal" beliefs about deprived peoples.

Under various federal legislative "Titles," training of teachers has high priority. The in-service programs have many of the same features as the pre-service, but there is one major difference. By necessity, practicing teachers have to fit in their retraining courses and experiences during after school or weekend workshops, or during school holidays. The research literature is replete with reports of the dramatic change effects produced by a one-shot "Human relations laboratory training," or a "Five-day Institute on the attitudes of black and white public school participants."

While some of the earlier reports tend to be extremely favorable, almost euphoric, the more recent, and more experimentally rigorous, studies indicate only limited gains. It is even possible that negative affect may be induced in teachers who enter short term encounter sessions where their innermost feelings are crudely violated. Only a few studies report this type of finding, but one suspects that harmful outcomes rarely find their way into publication.

Over all, however, providing realistic, factual information and opportunities to learn about the customs and mores of the disadvantaged along with increased contacts with families and community, do have cumulative, long term gains. A calm, rational consideration of the problem should make it obvious that lifelong beliefs and attitudes cannot be modified by viewing one informational film, or even by participating in a six-week summer institute. No programs, however effective, can guarantee instant success.

(Baty, 1970, 1972; Boyce, 1972; Brown, 1972; Carl & Jones, 1972; Collins, 1971; Fauth, 1972; Felker, Stanwyck & Kay, 1973; Florida Opinion Survey, 1970; Heath, 1970; Heller, 1971; Livingston, 1971; May & Guice, 1972; Miller & Strickland, 1972; Motivation and education of disadvantaged pupils, 1970; Negro history and culture, 1969; Partners in Learning, 1970; Thompson, 1973; Ulibarri, J, 1973; Ulibarri, M, 1970; Wheeler, 1970; and Whitmore, 1974.)

Effects of Bussing and Desegregation on Teacher Attitudes

On no schooling issue do people's political and social beliefs arouse as emotionally-charged responses as that of the integration of children from ethnic backgrounds within the public schools. Although bussing to achieve desegregation has been mandated by Supreme Court decisions for almost a decade, each year there are reports of violent resistance, as yet another community comes under the court order. Bussing, the overt manifestation of desegregation, is most vulnerable to attack.

Although it is actually only one aspect of the broader problem, bussing is discussed briefly here as a separate issue. That is because studies which focus on the effects of bussing usually look for these effects in terms of the behaviors of the students. Teacher attitudes are sometimes elicited in questionnaires or interviews, but the major concern is with pre-post comparisons of achievement test scores. These gains are compared to those of students not bussed and with those of students remaining in their original schools.

A study of a rather a-typical program, involving one-way bussing of white students into a disadvantaged inner city school, produced generally positive reactions from parents and teachers. Parents supported the project enthusiastically and became more involved in the school activities. There was improved attendance of both bussed and non-bussed children, and parents reported that their children liked school more.

These positive views were not consistent with reports from the students. The bussed students were a less cohesive group, felt the new school was more competitive, and were less satisfied than were the non-bussed students. These comparisons were based on an untested assumption that bussed and non-bussed students held similar attitudes before the onset

of bussing. It may very well be that this was not the case and the negative responses would have differentiated the bussed group prior to the experiment. (Hough & Hellervik, 1972.)

In spite of the negative public reaction to bussing, the few reports which reach publication, or are submitted to their projects' federal support agencies, usually demonstrate that school personnel believe there have been positive effects on children. For example, it is reported that "black pupils integrated into classes with white pupils have achieved at a higher level academically than do their counterparts who remain in the segregated schools. White pupils did not suffer any loss in academic achievement as a result of the bussing program." (Connery, 1971)

Additional findings from the same study indicate that principals and teachers in schools receiving black pupils believe that the bussing program made a valuable contribution to the improvement of education of disadvantaged children. While white children in the integrated classes continued to gain at the same rate as they did prior to bussing, the black children who remained in segregated black classes achieved at a significantly lower rate. (See also Epstein, 1972, and Gerard & Miller, 1971)

A study of the social adjustment of bussed children indicates that there may be serious discrepancies between the statements of educators and the feelings of the students. Student and teacher social adjustment ratings provide evidence that the majority of bussed students, black and white, adjusted well to their new school. However, teachers tended to rate white students as well adjusted, and black students poorly adjusted, more frequently than either group rated themselves. (Willie, 1972)

Teachers, as a group, see themselves equally accepting of ideas whether expressed by black or white students. Yet black students at both

elementary and secondary grade levels have more unfavorable attitudes toward school than their peers. They also feel that teachers are less accepting of them than they are of white students. (Coates, 1971)

A great many researchers have been concerned with the attitudinal changes brought about by integration. Only 43% of the white teachers in a southern school system felt that racial balance among faculty was desirable, or that it would improve education. They also did not approve of bussing. Quite the reverse was true of the black teachers; 60% of them thought that faculty balance and integration by bussing were desirable.

While the attitudes of this sample might need to be somewhat discounted as representing a regional point of view, there are many other studies which support the general finding that black teachers are more favorable to integration, and that older white teachers hold the most negative and conservative positions. (It should be noted that the study cited included a large proportion of the latter group among the respondents.)

Teacher morale and job satisfaction are significantly affected by a dramatic increase in the number of inner city children in the class. The effect of transfer to an inner city school is even more apt to induce "culture shock." While it is not surprising that the newly-hired teacher would have low morale in such an unfamiliar setting, it is of more concern that teachers who volunteer to "cross-over" often end up with the lowest morale and the greatest dissatisfaction with teaching. Morale factors were not closely related to demographic characteristics of age, sex, marital status, years of teaching, degrees held, grade level taught, or ratio of black and white students in the class. The most significant single variable in assuring positive attitudes and high morale was the rapport with the principal. Then came such features as satisfaction with teaching, rapport among teachers,

curriculum issues, adequacy of teacher salary, and school facilities and services.

(Braxton & Bullock, 1972; Carter, 1970; Conley, 1970; Heller, 1971; Holland, 1971; Justin, 1972; Kron, 1972; Landerman, 1973; Morris, 1971; Mulholland, 1970; Mullen, 1971; Pavlish, 1972; Ray, 1971; Robinson, 1970; Sherwood, 1972; Virag, 1973; and Wynn, 1971.)

Several evaluations of desegregation programs have been carried out. In general, these attempt to identify problems which recur in school districts undergoing desegregation and describe how they have been met. The Commission on Civil Rights is particularly concerned with learning how teachers react to students and teachers of other races, and socioeconomic backgrounds. The results indicate modest but positive gains. There has been no overall reduction inquality of instruction, and no change in the content of instructional materials. Black and white teachers differ considerably in their demands for curricular changes. Finally, it seems that teachers have been doing little to promote communication and interaction among students of different backgrounds either in their classes or in extra-curricular activities.

(Barnett, 1972; Diminishing Barrier, 1972; Ferguson, 1970; Krigsman & Winchell, 1972.)

Changing Teacher Attitudes toward Desegregation

Of all the variables in the educational context, the teacher has repeatedly been demonstrated to be the most critical ingredient. This is even more true where teacher attitudes toward minority populations are concerned. Not only the teacher, however, but all the instructional and administrative personnel must become aware of the organizational and human interactional problems, and the need for procedures to reduce tensions and hostilities engendered by the enforced confrontations.

Programs designed to develop more positive attitudes to minority children, discussed earlier, generally have many of the same features as those for facilitating the desegregation process. A major difference, however, is that studies concerned with changing attitudes toward desegregation are much more apt to include a wider spectrum of school personnel, e.g., school board members, community-wide bi-racial committees, project management, as well as principals, teachers, and non-academic employees.

Common features characterize programs designed to facilitate smooth transitions in desegregated schools. There is usually some type of large group institute, lasting two to ten days, for teachers, administrators, supervisors, and guidance personnel. Community leaders are expected to participate in planning, organizing, and carrying out these institutes, which focus on basic problems of human relations, resource materials, grouping, scheduling, and evaluation. In some cases there are extended institutes, lasting over several months, which concentrate on specific problem areas. School districts are encouraged to take a comprehensive approach to desegregation by involving school personnel, the total community, and the students. Frequently, leadership planning institutes help provide an opportunity for educators of different races to engage in frank and open dialogue

so as to effect an honest exchange of ideas and ventilation of emotions.

Such programs are generally given very positive subjective evaluations, but hard data are extremely scarce. It is particularly difficult to determine which of the many features of the programs is most critical, or to what degree the various types of activities contribute to attitudinal change. Preston and Robinson (1974) surveyed 150 black and white school teachers to determine attitudes toward interracial interaction before and after participation in an in-service school desegregation institute. They concluded that interracial interaction may be a necessary but not sufficient basis for attitude change. Furthermore, they cautioned that short term interaction experiences may serve to reinforce unfavorable racial stereotypes.

Longer interventions are reported as producing increased skill in interracial discussions, and the participants report that they are more comfortable, and feel less threatened in these interactions. It has also been noted that there is increased liking among the parties who interact, increased pressure for clarifying one's position on relevant issues, and increased pressure to implement the changes inherent in desegregation programs.

In summary, it would be well to repeat here the caution expressed in the first section of this chapter. Attitudes based on a lifetime of indoctrination cannot presume to be turned around in short instant-success programs. It requires a lot of hard work, professional expertise, dedication, and above all, good will. But it can be done.

(An-in-service program to assist Henderson City in achieving successful total desegregation, 1965; A program for solving problems pertaining to classroom organization, 1969; Crain, 1973; Deslonde & Flach, 1971, 1972; Dynamics of Educational Opportunities, 1970; Erickson, 1972; Evaluation

of ESAP, 1971; Garner & Wilbert, 1971; Greene & Virag, 1973; Institute to prepare teachers for desegregated schools, 1970; Jackson & Kirkpatrick, 1967; McCallister, 1970; Powell, 1965; Preston & Robinson, 1974; Puricelli, 1974; Purl, 1971; Special training institute on school desegregation, 1970; Sperry, 1972; and Weddington, 1965.)

CHAPTER IV - STUDENT ATTRIBUTES

Although teachers' attitudes in general have important impacts on their classroom behaviors, they have a far more serious impact on how individual students from minority populations are perceived and treated. A large portion of this chapter will therefore be devoted to reviewing the research on those features which differentiate poor or ethnically different children from their classmates, and how these become the bases of discriminatory teacher behavior.

The second part of this chapter will then look at those attributes of all children which may lead teachers to prefer or penalize certain students, completely apart from their relevant classroom behaviors. Among these, the sex of the student is probably the most prevalent basis for stereotypic teacher beliefs.

Attributes of Minority Children

By virtue of their membership in what has here been called "Minority Populations," children from poor families or ethnic minority groups have certain characteristics which distinguish them from their classmates. These may be superficial, such as color, hair style or texture, or facial features. They may become apparent only upon verbal interaction, e.g., non-English, foreign-accented, or dialect speech. Ethnically related attributes are often further confounded by those which characterize all poverty children regardless of race. Some of these may also be visually apparent: ragged, ill-fitting, dirty clothing, inadequate grooming, or bad teeth. Runny noses, smelly bodies, black fingernails, and dirt in and behind the ears, have disaffected many a middle-class teacher!

There are also psychological differences which often have an

even greater effect on the child's classroom behavior. Over many years of discrimination and deprivation, disadvantaged minorities have developed mechanisms for coping which are educationally dysfunctional. In the past, the concept of learning as the magic formula to open the doors to success stimulated and motivated emigrants from western cultures. But until comparatively recently, Black, Latin, and Native Americans, even with college degrees, still could get only the most menial of service jobs. Where families have been on welfare for generations, where hope is measured in terms of basic survival, it is not surprising that little value is placed on early intellectual stimulation and academic achievement. And without familial support for the attainment of realistic educational goals, children from minority groups have little impetus for scholastic success.

The characteristics of minority children may be true handicaps to learning, but often they are only adjudged so by the values and tastes of the majority culture. When they are demonstrated deficits, they should be the occasion of greater effort and consideration on the part of the teacher. Instead, they often serve to reinforce stereotypes associated with expectations of limited learning potential.

Teachers' attitudes toward others are tempered by their own group affiliations. Middle-class white teachers tend to be more permissive and less puritanical in outlook. They take more pleasure in the emotional aspects of the teacher-pupil relationship. They show less authoritarian attitudes toward children than do black teachers with lower socioeconomic backgrounds. These differences are fairly representative of the total populations, not just those who are teachers. When one looks at socioeconomic groups across ethnicity, very few attitudinal differences are found. Black teachers as well as white expect inferior performance from

disadvantaged black children. As a matter of fact, black teachers describe other black teachers as negative, worthless, and punitive, and even report low self-concept ratings of themselves. In comparing effective and ineffective teachers of disadvantaged children, a study in Minneapolis looked at middle-class, middle-aged white teachers. The results indicated that the effective teachers (as judged by their principals) tend to understand the impact of physical deprivation on their students, recognize unobtrusive types of racial and social discrimination, and avoid stereotypic labelling. They are non-punitive and find it rewarding to teach disadvantaged children.

Across the board, teachers with positive attitudes toward their profession, with good skills of communication, who demonstrate enthusiasm and a good sense of humor, are less apt to be prejudiced than those who rate low on these traits. Moreover, teachers who are responsive to criticism and able to accept responsibility are less prejudiced than those who are not. Unfortunately, there are more of the latter type of teacher in Title I than in non-Title I schools. This means that the children who need understanding and acceptance the most are least likely to receive it.

Teachers' views of students are generally incongruous with the students' views of themselves or their expectations of how teachers view them. In other words, teachers saw disadvantaged students more negatively and advantaged students more positively than either group saw themselves. But teachers who elect to stay in inner city schools tend to have a more favorable attitude toward black students than those who ask for transfers.

(Baca, 1972; Banks & Joyce, 1971; Boger, 1967; Chancellor, 1973; Cullen & Auria, 1969; Dunwell, 1971; Faunce, 1968; Goldenberg, 1972; Gouldner, 1971; Grady, 1971; Grambs, 1973; Long & Henderson, 1971; Long & Long, 1973; Rajpal, 1972; Sherwood, 1972; Soares & Soares, 1970; and White & Hall, 1970.)

Expectancy Studies

Most perceptive educators have long been aware of the fact that teachers' attitudes affected their expectations of children's learning. But it was the dramatic and highly publicized results of the Rosenthal and Jacobson (1968) research which triggered a whole rash of so-called "Pygmalion" studies. These have attempted to prove that ethnically different and poor children did not learn because their teachers did not expect them to, and hence, made little effort to teach them.

Basically, the argument was that low-achieving children, for whom teachers were given falsified high test scores, would show significantly higher achievement gains than similar matched children whose scores were not artifically raised. Since these faked expectations ran counter to the traditional teacher stereotypes, the early Pygmalion studies raised high hopes that the key to solving the problem of educating the minority child had been found.

Unfortunately, the theory was attacked from several directions. Other investigators could not replicate the Rosenthal and Jacobson findings. The original results were subjected to serious and valid criticisms. (It would be impossible to review here even a fraction of the studies, critiques, and reviews of studies and critiques, which have been published on the expectancy issue during the past six years. A selection of typical examples are listed at the end of this section.)

The factor of expectancy is of especial importance in a study of teacher attitudes since it so frequently reflects teacher predictions for students based not on actual performance but on attitudes and beliefs about population characteristics. Furthermore, while the expectancy studies based on false information have proved unrewarding, more perceptive and analytical explorations have gone far to clarify the critical issues.

Briefly, stereotyping is seen as involving both a categorical

response and a metaphysical generalization. Thus, a member of a specific ethnic group is believed to possess all the physiognomic and personality attributes associated with that group. Metaphysical generalization occurs when physiognomic cues are used to generalize directly to personal characteristics. For example, gross facial features and coarse hair and skin produce an impression of roughness, which is then interpreted in terms of personal attributes of boorishness and hostility. Similarly, generalizations are based on audio cues related to speech. Recent investigations are concerned with the comparative impact of audio vs. visual cues in determining evaluative teacher behavior. These will be discussed further in the section on language differences.

Research evidence supports the hypothesis that teachers' achievement expectations are related to ethnicity and social status. These perceptions are transmitted through a multiplicity of cues which can be received through both audio and visual modalities. In general, teachers rate children along the following hierarchy: middle-class white, lower-class white, middle-class-black, middle-class chicano, lower-class black, and lower-class chicano. The child with a Latin-American heritage is rated consistently lower than all other ethnic groups. Such evaluations are often the basis of differential academic achievement expectations for students from different ethnic and social class backgrounds. The subtle communication of these differential expectations, internalized and reinforced through peer perceptions and behavior, may set up negative self-fulfilling prophesies.

It has been suggested that social stereotyping effects do influence initial teacher evaluations but that these are altered over time as the teacher receives more relevant cues from the student's own behavior. As a matter of fact, many of the false information expectancy studies were

unsuccessful because teachers gave less credence to the predictive validity of test scores than they did to their own experienced judgments based on the children's behavior. Even so, an initial prejudicial attitude-set is unfair to these children.

There are direct implications for teacher training from these findings. Since it is clear that stereotypes are socially learned, teacher trainers should attack stereotypes before they affect classroom interactions. Such training efforts cannot be directed toward a single variable but must be focussed on features of both social class and ethnic differences.

Effects of Language Differences

(Brown & MacDougall, 1972; Clifford, 1973; Ekstrom, 1973; Emmerich, 1973; Finn, 1972; Friend & Wood, 1973; Garfield, 1973; Howe, 1971; Jensen & Rosenfeld, 1973; Meyer & Lindstrom, 1969; Miller, 1973; Nash, 1972; Palomares, 1970; Richmond & White, 1971; Rist, 1972; Rosenfeld, 1973; Rubovits & Maehr, 1971; Saunders & DiTullio, 1972; and Yee, 1968.)

An especially important determinant of stereotypic responses is that of the paralinguistic properties of speech. Language and dialect have been the subjects of a great many investigations. The disciplines of psychology and linguistics have come into head-on collision in the way speech differences, particularly black dialect, should be viewed. Psychologists speak of the language of the minority child as deficient, and feel that this deficiency is an impediment to learning and complex thought processes. Linguists see dialect as a perfectly valid form of communication. They attribute the inadequacies of minority children to the unfair requirement that they acquire subject matter content in the unfamiliar language, almost as if a left-handed child were compelled to write with the right hand.

With the "experts" at loggerheads, classroom teachers of minority children are caught in the middle. Verbal bombardment techniques to teach

children to "think" in Standard English have their strong supporters, just as do the proponents of the use of Black Dialect as a teaching language. For non-English-speaking children, advocates of bilingual programs, based on an equal emphasis on the second language, oppose the more traditional English-as-a-Second-Language (ESL) approach.

It would be beyond the scope of the present review to attempt to come to grips with the issues involved in this on-going debate. Of much more significance is the fact that teachers do evaluate their students in terms of speech characteristics. There are two types of investigations. One attempts to determine whether teachers do discriminate on the basis of student language characteristics. Some of these studies also attempt to determine whether there are any specific demographic or personality variables which can be related to prejudicial attitudes. The second type of research is addressed to the question of whether audio or visual cues are more potent in setting negative bias.

The extensive body of research on the first question tends to indicate that teachers offer fewer learning opportunities to children with limited facility in Standard English. Not only are their evaluations more unfavorable, but they also have diminished expectations of the learning potential of these children. More recent work, examining teacher variables related to language discrimination, has been less definitive. There is no reliable way of predicting the teachers' susceptibility to verbal stereotyping on the basis of sex, age, years of experience, grade level taught, extent of exposure to minority populations, or proportion of minority children in their classrooms.

The second line of research has been interested in examining more precisely just what it was about the minority students which elicited the negative teacher attitudes. In an original study (Shuy, Wolfram, & Riley,

1967), speech samples of 40 children were selected to include high and low SES as well as black, white, male, and female children from fifth and sixth grades. Two topics were used in open-ended interviews: What games to you play around here?, and, What are your favorite TV programs? These tapes were used in a doctoral dissertation (Naremore, 1969) with a group of representative inner city teachers. The teachers were asked to make candid responses on a set of 22 semantic differential scales "to determine (1) the extent to which teachers can be grouped together in terms of their common attitudes toward children's speech, and (2), the extent to which groups of teachers can be contrasted and compared with each other in terms of teachers' characteristics, child characteristics, rating scale characteristics, and child selected characteristics of children's speech."

As a result of careful factor analyses, 12 of the 22 scales were identified as producing two bi-polar factors: ethnicity-nonstandardness, and confidence-eagerness. The findings of this original research indicated that teachers rate children on the basis of phonological cues, and that these ratings are different, based on the race of the teacher. In general, however, teachers rate children with more standard speech patterns as superior to those with ethnic speech.

The semantic differential scales and the two-factor model have been further developed and validated in a series of studies carried out at the University of Texas Center for Communications Research. Several generalizations have been drawn from these studies. These are: 1) Teachers' expectations of children's academic speech samples involved judgments along two relatively independent dimensions of confidence-eagerness and ethnicity-nonstandardness. These dimensions were demonstrated whether the judgments were based on video-only, audio-only, or combined audio-video stimulus

presentations. They were also applicable to populations involving different ethnic groups. 2) The judgmental process appeared to combine stereotyping behaviors with evaluations of the language samples. 3) Teacher ethnicity interacted with child ethnicity in speech evaluations. 4) Speech evaluations could be used to predict teachers' expectations of children's academic performance.

These results open the question of how teacher attitudes are elicited by, and in turn affect, children's performance in the classroom. There are important consequences of personality background and other individual correlates of social stereotyping. The practical question for teacher education is the degree to which social stereotypes can be identified in a teacher or teacher candidate. There is also the sticky question of how discriminatory behaviors can be modified in the process of teacher training. This is most crucial since the evidence indicates that teachers' evaluative responses to speech differences are relatively stable and resistant to change even after experimental manipulation.

While no demographic features have demonstrated predictive validity in selecting out teachers who will be susceptible to social stereotypes, the semantic differential scale based on responses to speech samples seems a most promising tool.

(Andersson, 1972; Cohen & Kimmerling, 1971; Crowl & MacGinitie, 1970, 1974; DeStefano, 1973; Dulay & Pepe, 1970; Fleming, 1971; Gilberts, Guckin, & Leeds, 1971; Haynes, 1971; Hewett, 1971; Imhoof, 1971; Johnson, 1971; King, 1973; Leaverton, 1971; Light, 1970; Naremore, 1969, 1971; Politzer, 1968; Rosenfeld, 1973; Seligman, Tucker, & Lambert, 1972; Shuy & Fasold, 1973; Smith & Shuy, 1972; Stedman & Adams, 1973; Walker, 1973; Whitehead, Williams, Civikly, Witzke, & Streeter, 1972; Williams, 1970; Williams, Whitehead, &

Traupmann, 1970; Williams & Whitehead, 1971; Williams, Whitehead, & Miller, 1971; Williams & Shamo, 1972; Wissot, 1971; and Woodward & Salzer, 1971.)

Most studies of teacher attitudes toward ethnic minorities are concerned with the children from black and Latin American cultures. Often, comparisons are made among white, black, and chicano groups. While there are undoubtedly studies dealing with teacher attitudes toward other ethnic minorities, such as, Oriental, Samoan, and Eskimo groups, they did not surface in the literature search carried out for this report. There were, however, a number of investigations having to do with American Indians, or, as this group has been more appropriately called, Native Americans.

There is a long, sad history of the education of Native American children under the aegis of the Bureau of Indian Affairs. BIA schools in the past have been notoriously antipathetic to the preservation of the ethnic values of this group. In many areas the language and customs of the people had been almost completely eradicated. In spite of the enforced prohibition against use of the native language, these children were still considered extremely deficient in their facility in English. A survey carried out as recently as 1970 reported "that the education of American Indian children in the Southwest is rigid and inflexible, that classrooms are almost totally lacking in local materials, and that schools seem unwilling to make any concessions to enlist the enthusiasm or interest of the Indian community in the education of their children." (Smith, 1970)

Other data on teacher attitudes toward the teaching of Indian children collected at approximately the same time indicate that most of these teachers do not hold negative perceptions of this minority group. However, there is a very moderate position on assimilation. While not "Anglo-oriented," teachers were not inclined to see teaching of tribal or Indian culture as a

major objective for them in school. Although there were no striking differences in attitude based on the sex of the teacher, female teachers were more apt to hold favorable feelings about Indian culture, but were more authoritarian and directive in the classroom. Older teachers (over 51 years of age) were highest in authoritarianism, and favorable attitudes toward the Indian culture were shown to increase with teacher age. Also, elementary school teachers were more receptive to the inclusion of Indian culture concepts into the curriculum.

Approximately two-thirds of the teachers of Indian children were satisfied with their teaching jobs. Those teachers who were not satisfied were more Anglo-oriented, and saw more conflict between the influence of the parents and that of school policy. They tended to be the teachers in urban public schools with very few Indian students in their classes. It is thus possible that the dissatisfaction was a function of the general undesirability of teaching in inner city schools, rather than the presence of the Indian children.

Indian teachers are usually more favorable to the Indian children in their classrooms. They have greater knowledge of the Indian community and more contacts with parents and students outside of the school. But they, like the non-Indian teachers, have a strongly assimilationist attitude for themselves and their students.

(Bass, 1971; Birchard, 1970; Burdin, 1970, 1971; Krause, Ziegler, & Havighurst, 1970; Smith, 1970; and Wax & Walker, 1970.)

Teacher Attitudes and Student Achievement

In addition to the expectancy studies relating teacher attitudes and behavior to their generalizations based on ethnicity and social class, there are many investigations which focus on other student attributes. Of these the most important is that of intelligence, or rather scores on intelligence tests. Here, also, many investigators have attempted to determine the effect of biased information. While there is some evidence that knowledge of scores on intelligence tests does influence teacher judgments, data from longitudinal studies indicate that manipulation of I.Q. scores has a minimal effect on pupil achievement. Teacher judgments and rankings are far more accurate predictors of children's academic performance. These findings held even when children were promoted to the next grade and had teachers who were unfamiliar with the previous conditions. But even where there were significant differences in expectations as a result of an experimental manipulation, the teacher ratings of the children's performance were not affected.

The way in which a teacher is given I.Q. test information makes a significant difference in the degree to which this knowledge affects expectations of student performance. An I.Q. score entered into the child's school record has little impact. When the guidance counselor discusses the results of testing with the teacher, there is a more stable and meaningful impact on the teacher's perceptions. However, under none of the conditions of information communication were there any significant differences in student achievement.

(Babad, 1971; Beckman, 1973; Beggs, 1972; Dunn & Kowitz, 1970; Lawlor & Lawlor, 1973; Mallick, 1973; Mason & Larimore, 1974; O'Connell & Dusek, 1974; Wilborn, 1972; and Willis, 1973.)

In analyzing the conditions under which teacher expectancy affects pupil achievement, the behavior of the teacher has come under careful scrutiny. Differential teacher behavior toward certain students has been studied in relation to the teacher's attitude toward those students. Low and high ability groups receive different levels of teacher attention. Teachers present the more achieving students with more response opportunities.

Data on dyadic teacher-child interactions were collected, using the Brophy-Good observation system. Contrasting patterns were noted in the ways teachers interacted with students toward whom they felt attachment, concern, indifference, or rejection. Teachers paid the most attention to the children for whom they felt attachment. These children conformed and filled the needs of the teachers. They answered questions correctly and didn't make excessive demands. Teachers praised these students most and held them up as models to the class.

The children for whom the teachers expressed concern made extensive but appropriate demands upon the teacher's time. They initiated the most frequent contacts and were given most attention by the teachers, who also allowed them greater freedom. Children for whom the teacher expressed indifference received few contacts and were seldom noticed.

Rejected children made the most inappropriate demands and were often criticized when they attempted to approach the teacher. They were under constant surveillance, with the teacher making frequent attempts to control their behavior. This group received the most frequent public praise and blame.

The findings of a series of studies on this same theme indicate that, based on the teacher attitudes toward them, certain children receive a great deal more attention than others, and the quality of this attention

varies considerably. Children in all groups are aware of the differential teacher treatment. The bases for these discriminatory attitudes are personality and behavioral variables not specifically associated with race or social class.

(Good & Brophy, 1972, 1974; Helton, 1972; Jeter, 1973; Mendoza, Good, & Brophy, 1971; Rogers, 1970; Silberman, 1969; and Wilkins, 1972.)

Studies of teacher attitudes may have several levels of penetration. First, they may be concerned with the attitudes per se, and perhaps attempt to map some of the precursors or determinants of these attitudes. This is essentially an assessment analysis based on questionnaire or interview information. It may or may not include some correlational statistics. Most of the research reviewed in the first section of this chapter is of this nature.

A second level is tapped when teachers' attitudes are related to their behaviors toward the attitude object. The third level relates internal predispositions or attitudes to student achievement as a function of overt teacher behaviors.

There are also several truncated levels. Teacher attitudes may be related to pupil outcomes with no attempt to look at the intervening behaviors. Or teacher classroom behaviors are observed to determine how they affect student performance with no attention to the attitudinal variables which predispose discriminatory teacher behavior. The next group of studies exemplifies the third level, and includes both complete and truncated types. Many of them can also be described as "pygmalion" studies, involving teacher attitudinal predispositions toward minority populations. They are included here because the research emphasis is primarily on changes in student behavior.

Acquisition of reading skills is of great concern to most educators. Thus, many attitude-achievement studies attempt to test the hypothesis that

the teacher's attitude toward a student's capacity for learning will affect how the student performs on a standard reading test. This hypothesis has been examined by a number of different investigators in a variety of contexts. In some cases, teachers were given false test scores, or otherwise led to expect a growth spurt. Other teachers were asked to make predictions, or to rank their students either prior to, or after receiving test scores. In one experiment, both students and teachers were given achievement scores and information as to areas where more work would be needed. Then, there were tutors who were given true or biased information, with or without knowledge of test content.

The evidence does support the notion that negative bias, such as the stereotypic attitudes discussed earlier, is related to poor student performance. But in none of the studies cited here were any favorable achievement effects attributable to experimenter-induced positive expectations alone. It is quite clear that teacher expectations have multiple determinants. Most teachers agree that children who are active and attentive will learn to read in first grade no matter what their ethnicity or social background. And they also agree that there is a measure of validity to aptitude test scores. But test scores are strongly tempered by the teachers' perceptions of the classroom behavior of the children. While they are influential factors, race and SES do not as frequently elicit bias in today's teachers as they have in the past. Attention and activity characteristics of children have a strong effect. Experiments which manipulate test scores without changing the child's classroom behavior will be doomed to the limbo of "no significant differences."

(Buford, 1973; Dillingham & Johnson, 1973; Doyle, Hancock, & Kifer, 1971; Dudley, 1970; Dusek & O'Connell, 1973; Fleming & Anttonen, 1971; Goldsmith & Fry, 1971; Gustafson & Owens, 1971; Kilanski, 1971; Kohn, 1973; Long & Henderson, 1972; Pellegrini & Hicks, 1971; Persely, 1973; and Schwarz

& Cook, 1972.)

With the repeated failure to replicate the Rosenthal and Jacobson findings, a number of investigators have attempted to take a closer look at the intervening variables. What is it that the teacher does or does not do, or what is it that happens in the classroom itself, between the setting of the expectation stimulus and the child's test-taking behavior?

Children who are in classrooms where they have little control, are apt to express their frustrations in ways which teachers label "problem behavior." If children are permitted to exercise more personal control over what happens to them, they are not forced into acting-out, symptomatic behavior. The classroom structure, then, is an important variable, quite apart from teacher expectations or children's ability, which can affect learning and test performance.

Several investigations employed an expectation-observation-assessment design to examine the intervening variable more precisely. A consensus of the findings indicates that where the manipulated expectations did not cause the teacher to provide special treatment for the up-graded children, there were no significant differences in the performance of the high and low expectancy groups. In experiments where increased learning opportunities were offered, where instruction was made more relevant, and teaching enthusiasm was stimulated, there were more favorable results. Yet favorable teacher expectations and changed behaviors, while probably necessary, are not always sufficient by themselves to produce dramatic achievement gains. The teacher behavior of listening to the child with approval is more strongly related to achievement than any other teacher interaction behavior. Finally, it has been noted that the teacher is only one source from which the child receives expectancy cues. Perhaps the teacher actually plays a rather inconsequential role compared to familial, peer, and street life influences.

This would mean that the Rosenthal-Jacobson expectancy model is rather naive, and that research designs must be developed to illuminate the dynamic interaction between expectations and performance.

(Caudry & Wilson, 1973; Finn, 1972; Fox, Lippit, & Schmuck, 1964; Garner & Bing, 1973; Hooley & Jones, 1970; Jose & Cody, 1970; Nagler & Hoffnung, 1971; Peng, 1974; Sears, 1972; Stern, 1971; and Wilkins, 1972.)

Sex of Student as a Determinant of Teacher Attitudes

Because teachers in the elmentary grades have traditionally been women, studies in this area usually examined the question of whether the female teacher treated boys differently than girls. With the increasing awareness of the importance of male models, especially for boys who come from single parent, mother-only, homes, there has been an increase in the number of men teachers for the early grades. Accordingly, recent research is more likely to examine the interaction effects of sex of teacher vis-a-vis sex of student. Both types of studies will be reviewed here.

The basic question is: Do teachers have stereotypic attitudes toward boys and girls which lead to differential expectations for academic achievement? If this is true, do these preconceptions affect the quality of their instruction so as to bias the children's acquisition of academic competencies? There seems to be little doubt but that teachers expect different kinds of behaviors from girls, based on socially determined stereotypes. Pre-service teachers have negative attitudes and expectations of boys to begin with. These seem to be exacerbated by actual teaching experience. Teachers perceive girls as more moral than boys, even though there was no difference in their behavior in test situations in which they were given opportunity to cheat. Boys receive more criticism, as well as other types of teacher attention, than do girls.

When girls have academic problems, they are given more attention by their teachers than boys with similar learning difficulties. However, teachers are more apt to attend to the personal-social problems of the boys. In general, teachers are willing to work with children demonstrating undesirable characteristics such as below average ability and poor grooming. They are very hostile to the acting-out, independent, assertive child.

The latter finding provides a very important clue to the bases of sex-discriminatory teacher behavior. For evidently it is the active, restless, physically aggressive behavior of boys which earn the negative ratings. It is no new insight that the middle-class, middle-aged, white female teacher prizes conformity, obedience, and studiousness, which our culture identifies as "feminine" traits. This behavior is rated positively whether demonstrated by boys or girls. The well-known stereotype of the "teacher's pet" is the prissy, Eton-jacketed, eye-glassed boy who would rather stay after school and clean the blackboards than play ball in the playground.

There is more than literary or hearsay evidence to attest to this. Observations of teachers' behavior with two groups of girls, one group perceived as conforming and orderly, the other as active, assertive, and nonconforming, revealed that the girls who reflected the social stereotype were given significantly more praise and encouragement. It was even more interesting to find that the teachers were apt to view the girls in the latter group more punitively than they did boys who demonstrated the same behaviors.

Male students who were perceived as "more feminine" received higher grades and better marks in conduct. There is no way of determining the causal relationship. That is, did they get better marks because of their feminine characteristics? Or, were they perceived as feminine because they received higher test scores? Further research indicates that teachers

accord preferential treatment to high achievers with dependency behaviors, regardless of gender. This is congruent with the teacher's professional and personal values for girls. With boys, there is dissonance between these two value systems; the high achievement is valued professionally, but the dependency behavior is considered an inappropriate male behavior.

Several expectancy studies have been designed to include sex of students as one of the independent variables. The same types of results are found as with minority students. Teachers tend to have negative stereotypes of their male students. And teachers who believe that boys will be less successful in learning to read than girls often find their expectations fulfilled. But these preconceptions are far less important than the teachers' own impressions and reactions to the children's classroom performance and behavior.

Much the same findings are true with male teachers. (Parenthetically, masculinity-femininity ratings of the male teachers studied were not available.) The data clearly show that both male and female teachers treat male and female students in the same way. That is, they both treat male students one way, and female students another. These differences are not related to the student's sex group membership, but to their classroom behaviors.

Boys are more active, and interact more frequently with the teacher, but a larger proportion of these interactions with male students are negative. Sex differences in classroom interaction patterns are due mostly to the students, not the teachers. Teachers generally are reacting to the different pressures presented by boys and girls. Whether the teacher is male or female, the role of the teacher has been feminized by the institution of the school. This role, especially in the elementary school, is that of

a socialization agent. A major function of the teacher is to inculcate socially-accepted stereotypes.

The most important variable on which teachers differ seems to be a function of the subject matter taught. Mathematics teachers tend to be more directive, convergent, and product-oriented, whereas social studies teachers ask more open-ended questions, encourage divergent thinking, and are more process-oriented. Math classes focus on the mastery of specific skills, and teachers are more critical. Social studies classes are more relaxed, and have more discussion periods. These differences are true whether the teacher is male or female, although most math teachers are men.

(Asher & Gottman, 1973; Brandt & Hoden, 1974; Dempsey, 1973; Doyle, Hancock, & Kifer, 1971; Etaugh & Harlow, 1973; Felsenthal, 1971; Good & Brophy, 1969; Good, Sikes, & Brophy, 1973; Grambs & Waetjen, 1966; Halperin, 1971; Helton, 1972; Herson, 1974; Krebs, 1969; Lahaderne & Cohen, 1972; Levitin & Chanalane, 1972; Levy, 1972; McCandless & Roberts, 1972; McNeil, 1964; Mason, 1973; Matheny, 1973; Palardy, 1969; Pellegreno & Wendell, 1973; Ricks & Pyke, 1973; Sigler, 1973; and Zach & Price, 1973.)

Many teachers unconsciously inculcate sexist stereotypes by the kind of literature they make available to the students, and the assignments and materials that are provided. This is particularly important in the early years, when the young child's concept of sex role is beginning to be internalized. The subtle pressures for girls to select the "house-keeping" corner, while boys play with blocks and woodwork, begins in the kindergarten, and is perpetuated through vocational courses in junior and senior high school. If women are truly to take their roles as equals in this society, teachers must be made aware of the insidious effects of sex-typing under the guise of equal educational opportunity.

(Chasen, 1974; Jacobs & Eaton, 1972; Singh, 1973; and Wahab, 1973.)

Another student attribute which affects teachers' attitudes is that of physical appearance. This is frequently related to other sources of stereotypy, such as race or sex. At every educational level, from kindergarten through post-graduate school, research has shown that identical products are given different evaluations, depending on whether the pictures of the attributed authors are attractive or unattractive. Only one investigation addressed to this problem is given here (Clifford & Webster, 1971), but the authors have listed 32 additional references.

Homogenous Grouping

A final consideration in the discussion of student attributes has to do with how various student characteristics are used to form groupings for different levels of instruction. "Ability grouping" is usually used to describe a system of organizing children of approximately the same age and level of achievement for instructional purposes. It does not apply to the common practice of having three or four reading groups in the same classroom. Findley & Bryan (1970), in a definitive work on this topic, have described a wide variety of criteria or techniques for grouping children. Some of these they find completely unacceptable.

Ability grouping in general, tends to perpetuate socioeconomic and ethnic differences. Placements are made on the basis of standard achievement tests, which are apt to penalize children from minority groups. Furthermore, the value of grouping for high achieving children has not been established, while there is definite evidence that it can be detrimental to average or low-achieving children. Yet, in spite of its harmful features, ability grouping has the unqualified support of most teachers. And usually those teachers who advocate this procedure prefer to teach the average or superior classes rather than the low achievers.

(Findley & Bryan, 1970; McGilligan, 1970; Rosengarten, 1971; and Wilder & Blumner, 1972.)

CHAPTER V - INNOVATION

If historians of the future characterize the last 10 years as the "decade of innovation," it will not be without good reason. Never before have there been the extensive changes in the philosophy, content, and structure of education as those which have occurred in this relatively short period. For convenience, the research in this broad area is categorized under three main headings: Instructional Innovation - the modifications having to do with the content and processes of education and the manner in which instruction is delivered to students; and Organizational Innovation - those changes which relate to the structure of the educational institutions themselves. The third, or introductory section, will cover some of the general problems associated with innovation per se.

Teacher Attitudes Toward Innovation and Change

The Stanford Center for Research and Development in Teaching, at Stanford University, has initiated a series of research investigations having to do with innovative educational practices and their implementation. Of particular interest are two reports of the project on Organizational Support for Innovative Instructional Programs (See Cohen & Bredo, 1974, and Deal, Meyer, & Scott, 1974.) The researchers working on this longitudinal investigation have a sociological orientation. They are interested in relating organizational characteristics of school districts and schools to the installation, support, and continuation of innovative programs. Since most innovations produce increased instructional complexity, they require a high degree of coordinated support from everyone involved. These optimum conditions are rarely found, so there is a high rate of mortality. Either an unsuccessful program is replaced with

another one from the seemingly endless supply of new panaceas, or there is a return to traditional teaching practices.

Approaching the same problem from an administrative-marketing point of view, Pincus (1974) emphasizes the need for appropriate incentives for maintaining an innovation after the original funding source withdraws its monetary support. For most innovations are "put on" the school principal and classroom teacher, perhaps by an administrator in the local educational agency who sees an opportunity to get some badly needed financial help. Under such conditions, when one federal program runs out of popular and fiscal support, it is replaced by the one which is current. If Follow Through funds run out, there are monies in Bilingual Education, or in programs for the handicapped, or in vocational education. Because they are so evanescent, educators have learned not to become too ego-invested in them. It is much safer to take a fatalistic attitude: This too will pass!

In the stormy field of conflicting educational ideologies, there is no other issue on which there is such unanimous agreement as the belief that the classroom teacher and building principal are the crucial ingredients of a successful innovation. Without their continued and active support and interactive involvement, no program, no matter how well conceived or rigorously tested, can long survive. Thus, the attitudes of teachers and administrators to innovations is extremely important.

A number of investigators have attempted to understand the characteristics of teachers and the features of innovations which offer the best prognostication for success. They have also tried to pinpoint the problems which inhibit change. But these efforts have been rather fruitless. Under a wide variety of conditions, correlational studies have shown no consistent association between any of a number of demographic variables and the active acceptance or rejection of a major educational change. Neither age, sex,

grade level taught, type of training, nor years or type of experience could be used as a basis for prediction. There are no clear-cut features which differentiate the innovative from the traditional teacher. It is the same with the setting. Size of local educational agency, number of schools involved, geographic location, or type of community, make little difference so far as installation of an innovation is concerned.

In spite of the generally negative findings, there are certain trends which may offer some guidance. In a high school setting, the counselors and principal were generally more accepting of innovation than teachers. This may very well be because they are not immediately involved in program delivery and hence do not have to make major modifications in their accustomed procedures. Teachers have expressed interest in innovations primarily as they serve their own purpose. Very few express a completely altruistic receptiveness.

Middle-aged male teachers were the most resistent, and female teachers under 29 years of age most likely to support the changes. Elementary teachers are more likely to have positive attitudes toward innovative practices than secondary teachers. Upper grade teachers are more positive than lower grade teachers.

As a matter of fact, teachers, administrators, parents, and school board members all favor innovations which will make children more successful academically. It is how this is to be achieved which creates the problem. Five conditions have been identified as being associated with successful innovation: 1) recognition of the need for change and an appreciation of the relative advantage offered by the particular innovation; 2) a systematic management process with effective leadership; 3) a receptive teaching staff who perceive the new procedures as not incompatible with their own philosophy; 4) communicability of the underlying components of the innovation;

and 5) the coordinated efforts of teaching staff, administration, board of education, and students to make the innovation succeed.

Certain features of innovative programs receive consistent responses from most educators. For example, teachers generally prefer reduced class size and shorter class periods. They do not like the idea of students being able to determine whether or not they will attend classes. In other words, they want school attendance to remain compulsory. They do not like differentiated staffing and would like to retain classroom autonomy. Team teaching and departmentalization are not favored, but most teachers would not mind a non-graded approach within the autonomy of their own classrooms. The attitude toward in-service training is favorable only if training is held in the local school building during the regular school day. Visits to other schools would be desirable if the school system would provide substitute teachers to cover their classes while they were away.

It is obvious that attitudes such as those expressed above would seriously impair the potential success of many innovative programs. A major requirement is that the teachers be introduced to the contemplated changes before the program is brought in. If at all possible, they should be involved in decision-making at every crucial phase of the program installation. The school principal must take active leadership as the change agent. Many federally funded programs introduce a person from outside the local system to act as a special administrator. To be effective, this person must have unusual charismatic appeal and establish open lines of communication with local administrators.

Since attitudes are predispositions to behavior based on a system of beliefs about the attitude object, feelings about innovations are associated with the amount and kind of information available. A survey of a

random sample of teachers and principals in the San Francisco area was carried out to determine the interest in, knowledge of, and attitudes toward, educational innovation, research, and development. The responses indicated a wide range of interest in new developments. The respondents demonstrated some knowledge of at least 70 different innovative programs. Administrators favored research, greatly over-estimated the amount of money being spent on research and development, but felt that even their exaggerated estimates were insufficient. The investigators concluded that "despite some lack of information about specific innovative projects and about research and development activities, the participants revealed a general awareness of innovations, a moderate to strong interest in learning more about educational discoveries, and a clear disposition to support educational innovations."

It has been demonstrated that programs which provide classroom teachers with modest funds to help them implement their own innovative ideas resulted in a great deal of professional satisfaction. Students of the teachers showed positive behavioral changes, and the teachers themselves became somewhat more receptive to innovative ideas introduced by administrators and other change agents. Finally, the need for improved dissemination of the objectives of innovations has been repeatedly emphasized.

(Administrators' and teachers' reactions to educational innovations, 1967; Beckerman, 1971; Carpenter, 1970; Cohen & Bredo, 1974; Deal, Meyer, & Scott, 1974; Effler, 1972; Helsel, 1972; Hood & Hayes, 1967; Hoy and Aho, 1973; Humphrey, 1970; Mickelson & Armstrong, 1973; Moody & Amos, 1972; Morgan, 1971; Peterfreund, 1970; Pincus, 1974; Rafky & Beckerman, 1971; Sorenson, 1973; Van Wyck, 1971; Vickrey, 1972; and Walthew, 1970.)

Instructional Innovation

One of the most common types of instructional innovation affects the subject matter curriculum. The majority of studies related to teacher attitudes in this area have been covered in Chapter 2, under the respective disciplines. An innovative concept in itself, the involvement of teachers in curriculum decisions has led to the development of institutes for modifying teacher attitudes toward a new approach. In many cases this is part of the substantive technical training.

Prior to the retraining efforts, it has been pointed out, surveys of personality and attitudinal characteristics should be made so that only teachers who are open and amenable to change are selected for programs which involve non-traditional materials or procedures. Care in selection of teachers is even more critical when concepts and techniques antithetical to accepted practices are being instituted. For example, programs based on behavior modification theory can be expected to arouse a great deal of emotional resistance, while use of computer technology may frighten many teachers. Although the research evidence is far from prescriptive as to the characteristics predictive of the successful innovator, it does seem that young, less experienced teachers (but not beginning teachers) are more likely to adopt change with enthusiasm.

Goals of training institutes may be expressed in terms of learning specific skills, such as writing behavioral objectives or developing learning packages. Or they may be in the affective domain: gaining skill in group dynamics; developing more self-understanding, openness, and appreciation of the affective variables associated with learning. Participants in such institutes frequently report positive subjective reactions. There is, unfortunately, little "hard data" to indicate to what extent these findings can be generalized. There is no question but that acquisition

of knowledge and skill, e.g., writing behavioral objectives, are attained more readily than modification of attitudinal and humanistic values.

(Chase, 1969; Leith & Butts, 1974; Lipman, 1973; Mahan & Gill, 1972; Richardson, 1972; Tamminen, 1970; and Wallace, 1971.)

Behavioral Objectives:

The specification of behavioral objectives and the incorporation of a more operational, objective attitude toward the educational process has been associated with the need to specify performance in military training programs. It represents a philosophical orientation which is alien and antipathetical to many traditional teachers, who tend to place high value on affective, motivational-emotional behaviors. Thus, much of the resistance to specifying outcomes in behavioral terms may be traced to the fact that an inordinate emphasis is placed on information and skill learnings.

The characteristic of behavioral objectives which has created the greatest opposition is the successive analysis of behaviors into smaller and smaller units. Most teachers would agree with the need for overall instructional objectives, and even with the need for instruction to have precise definition. But they believe that often the endless specificity is carried beyond the point of absurdity. Associated with this criticism of over-specificity is the fact, pointed out earlier, that the outcomes for which teachers express the highest value do not lend themselves to easily described behavioral units.

In order to obtain data on educational priorities, 90 key decision-makers, including school administrators, teachers, and community leaders, representing three socioeconomic levels, were surveyed. The task was to sort 100 behavioral objectives, previously identified as belonging to high-cognitive, low-cognitive, tool-skill, affective-personal, and affective-interactive categories, according to their level of priority. It was

extremely interesting to find that all respondents, regardless of group, school district, or socioeconomic status, placed the highest priority on high-cognitive (i.e., abstract thinking, problem-solving, etc.) and affective-personal categories. In spite of their concurrence with these priorities, observations showed that the teachers' classroom practices reflected the heaviest emphasis on tool and skill learning activities. Other studies have demonstrated a similar disparity between teachers' priorities and their expectations of achieving their objectives.

A number of investigators have attempted to learn whether knowledge of the theoretical and practical applications of behavioral objectives has any influence on teacher attitudes toward them. In other words, are the emotional reactions and opposition due to a lack of information? Do those with more knowledge about behavioral objectives have more favorable attitudes toward them?

Surveys have indicated that there is a high incidence of familiarity with behavioral objectives among educators at all levels of the educational establishment. There is also a high level of involvement in the writing and use of behavioral objectives. But the research has failed to establish a significant relationship between teachers' knowledge of, and attitudes toward, behavioral objectives. Furthermore, reading a variety of texts on the subject does not produce any significant changes in these attitudes. As a matter of fact, teachers who read the most seem to be the most negative.

Behavior Modification:

Far more than is true with behavioral objectives, highly charged emotions are aroused by any mention of the terminology associated with a "scientific" approach to the modification of behavior. From the point of view of the behavior analyst attempting to produce a more favorable environment for learning, this opposition can become highly irrational. In early

childhood education, the behavior modification programs have run head-on against the concepts of developmental psychologists and nursery school personnel. Some of the misconceptions stemming from this conflict are that behavior modification implies that the child is to be blamed for his misdeeds and that it is the child, not the content or environment of teaching which needs to be changed. Because negative behavior is ignored and discouraged, the inference is that children are punished for expressing negative feelings. Because they are not to be encouraged in aggressive behavior, the inference is that natural feelings must be suppressed and frustrated.

More extensive experience with the introduction of behavioral principles into the classroom has pointed up the semantic basis for a large proportion of the negative emotional overload. In a survey in which behavioral techniques were described, but not identified, as being part of "behavior modification," over half of the respondents indicated that they used the specified procedures in their classrooms. Yet, many people still believe that "operant conditioning", or "behavioral engineering," as behavior modification programs are often called, are systems for brain-washing children. Science fiction literature has left the impression that conditioning techniques can create un-thinking robots. This is indeed far removed from reality.

Appropriate training programs have demonstrated that increased familiarity with the reinforcement techniques for classroom management, and increased understanding of the motivational basis for learning, have made many converts to these innovative procedures. Once teachers understand that behavior modification is not a rigid, mechanistic system, and that it can be adapted to individual teaching styles, their attitudes can become extremely positive. These are further reinforced when the effective delivery of the program produces dramatic achievement gains in children.

But in one area, training programs seem to have little impact. It is extremely difficult to improve methods of record-keeping, an essential component of all education, but particularly crucial in successful behavior modification.

(Coop & White, 1972; Frey, 1972, 1973; Gardner & Butts, 1972; Grieger, 1972; Kaya & Woog, 1972; Martin, 1974; McClure, 197[illegible] Sherman, 1971; Smith, 1972; Tamir & Jungwirth, 1972; Ulin, 1971; Thompson, 1972; Vane, 1972; and, Vocational instruction systems of the Air Force applied to civilian education, 1971.)

Individualized Instruction:

A major innovation which does little to violate existing and traditional teacher educational philosophy is the recent emphasis on individualized instruction. Educational and developmental psychologists may find it rather surprising to see individualization described as an innovation. They have been teaching the importance of individual differences for almost a hundred years, ever since the early psychophysical experiments in Wundt's laboratory. To do educators justice, it must be pointed out that individualization is really not a new concept. It was the basis of the progressive education movement which grew out of the writings of John Dewey, published around the turn of the century. Modern applications of the theory of individual differences, such as IPI (Individually Prescribed Instruction), and IGE (Individually Guided Education), are, in a sense, a step backward. They leave room for individual differences in rate of learning, leaning heavily on the objective measurement of skill acquisition, but the assumption is that all children will complete the course content. In other words, each child is required to master the same program but is permitted to proceed at his own speed.

No significant differences in teachers' attitudes have been found in experiments where IPI or IGE are compared with vaguely identified "traditional" classes. The teachers in the experimental groups are generally described as favorable to the new program. It has also been observed that these teachers have more receptive attitudes to the teacher aides in their

classrooms. Undoubtedly, this reflects the fact that individualized instruction would be well-nigh impossible in a one-teacher classroom.

When attitudes of teachers toward "individualization", as a general concept rather than a specific program, are solicited, approximately half the teachers say they value consideration of the pupil as an individual. But only less than a fourth of all teachers survyed by Bosco (1972) report that they apply this principle in their own classrooms. While teachers may feel that individualized instruction is necessary for math and reading, they prefer to work with the class as a whole most of the time.

A number of investigations are concerned with the effect of institutes or training programs on the modification of teacher attitudes toward individualization. Even though questionnaires administered at the conclusion of training may indicate significant movement toward a more positive attitude, it may be an unjustified "leap of faith" to assume that there will be a consistent and persistent change in teachers' behaviors relative to grouping for instruction.

Other types of instructional innovations have to do with new concepts of teacher training, e. g., mastery teaching, and competency performance based education. Such programs generally report favorable teacher attitudes to the new concepts, but there is some indication that it is easier to effect acceptance of the theory than to institute the practice.

(Bosco, 1971; Carmichael, 1973; Designing a campus plan for quality education, 1972; Estes, 1971; Individualized instruction in a prototype school, 1972; Kelley, 1973; Kelley & Zimmer, 1973; Lyons, 1974; Mohan & Hull, 1972; Napier, 1971; Okey, 1973; Report of the Triple I project, 1972; Richardson, 1972; Rookey, 1973; and Scriven, 1972.)

Technical Innovation:

As successive breakthroughs in communication technology occur, they

are adapted to the service of education. New techniques for reproduction, duplication, and presesentation of auditory and visual stimuli have been adopted soon after they have gained public acceptance. From still photographs to slide projections and moving pictures; from phonograph records to tape cassette recorders and playback machines; and from separate audio and visual modalities to combined presentations, educational technology has become more and more complex and sophisticated. Talking typewriters, multi-station learning centers, and language laboratories require mechanical skills and understandings which are not part of the traditional female teacher's repertoire.

In spite of the fact that courses in audio-visual education are part of most teacher training curricula, a survey of 201 high school teachers, judged to be most effective by their departmental chairmen, revealed that less than one-fourth of them had had, as undergraduates, any instruction in the use of media. Although tape recorders, overhead projectors, and other audio-visual equipment were readily available, they were seldom or never used. The only communication tool used in all classrooms was the bulletin board. Many of these teachers felt that they would be more apt to use A-V techniques if they had more instruction. Other data provide evidence that teachers with such training do use media more often and have more favorable attitudes toward its use.

To determine what conditions would create a more favorable audio-visual climate, 432 teachers in 50 secondary schools, and their audiovisual coordinators, were surveyed. The responses of the participants indicated that: 1) a unified media program produces no better audiovisual climate than a separate library and audiovisual program; 2) schools with full-time media coordinators have a superior audio-visual climate than those with part-time coordinators; 3) part-time coordinators do not produce any more

favorable climate than coordinators without released time; and, 4) the background and attitudes of the coordinator are critical in producing a good audiovisual climate.

(Aquino, 1974; Audio-visual technology and learning, 1973; Dawson, 1971; Dodge, 1974; Donelson, 1970; Grant, 1969; Hartley & Holt, 1971; Mediated instructional materials, 1970; Media utilization project, 1971; Miller, 1969; and Yeingst, 1973.)

Television and Video Technology:

For a long time, high costs made it impractical to use television in education. But recently, with the increased availability of funds as well as the decrease in the price of a TV set, television has become widely accepted as an instructional medium. This may take several forms. Instructional Television (ITV) or Educational Television (ETV) involves live projection at the time of the original broadcast, or taped replays emanating from the studio. But teachers are unhappy with ITV and ETV because of the rigidity and inconvenience of the scheduled broadcast times. Lack of control over the televised lessons, and the attractive, highly competent TV instructors, make many classroom teachers feel a loss of status, resulting in an impaired teacher-student relationship.

Closed circuit television (CCTV) offers somewhat more flexibility, but the cost of maintaining a broadcast facility is beyond the reach of many school districts. Furthermore, teachers are not over-eager to spend their own time to produce materials for CCTV presentation, nor are these materials likely to be up to professional standards.

The recent invention of low cost equipment for recording TV broadcasts on tape, for transmission when the content fits into the educational program of the teacher, has provided the flexibility needed. Also, many ETV programs are accompanied by manuals and printed materials for supplementary activities, which greatly increase the value of the programs. It would be tragic if the wealth of well-produced and exciting TV shows,

full of educational content on a great variety of subjects, is not made available to the teacher. Purchase of equipment for playing video tapes in the classroom is a most worthwhile investment.

Simply supplying access to video facilities does not guarantee utilization. Teacher attitudes and habitual resistance to change are still critical variables. Nor is television viewed as appropriate for all children. The well-publicized use of slick television presentations for young children has been severely criticized by early childhood educators. Depending, of course, on how they are used by the individual teacher, televised programs in the early years may stifle creativity and individual exploration. Passively sitting and watching is not the effective way to foster learning. Many teachers feel that programs such as "Sesame Street" should be viewed in the home, not in the school. They feel that class time would be better spent on activities in which the children can have first-hand experiences.

(Ayers, 1972; Ball, 1970; Dobosh & Wright, 1972; Gilliom & Zimmer, 1972; Kirkorian, 1971; Payne, 1971; and Sussman, 1973.)

ITV and CCTV have been widely used in areas where educational facilities are not readily available. Reports of the experiences with this medium in Samoa, El Salvador, and Australia indicate somewhat conflicting results. There is some evidence that reactions to the use of ITV are quite favorable in the early years, with a sharp decline in the upper grades and in high school. It is possible that, as teachers become more skilled, they begin to feel impatient with the centralization of the broadcasts and want to have more individual control over their educational procedures.

(McAnany, 1970; Hawkins, 1973; and Schramm, 1970, 1971, 1973.)

Another recent application of television in education has been in the preparation of materials for bilingual education. Because of the shortage of qualified bilingual teachers, it was felt that the presentation of

instructional content in the second language would be an effective way to supplement the classroom activities. A number of research studies have been carried out to determine the effectiveness of the programs, with special emphasis on parent and teacher perceptions of their appeal, utility, and comprehensibility. A total of 250 parents, 244 teachers, and 800 children in eight cities responded to questionnaires. The returns showed that more than 90% of the parents had positive attitudes toward the programs and felt that they fostered cross-cultural understanding. More than 80% of the teachers considered the shows useful, reinforcing to their curriculum, and appropriate for children in the early grades. Almost 99% of the children said they liked the shows. Test results demonstrated that 75% of the content was comprehensible and that the program promoted language development.

"Carrascolendas" is a bilingual instructional television program patterned after "Sesame Street." It is designed to introduce Mexican-American children to the dominant American culture and, at the same time, encourage them to retain their cultural identity. The program also attempts to maximize the child's school success by promoting the acquisition of reading and math skills as well as facility in the second (English) language. Teacher attitudes were measured by means of a mail survey. A particular concern of this study was to determine whether teacher attitudes toward the program were influenced by different levels of teacher facility in the Spanish language. From the data, it was concluded that teachers with a high degree of bilingualism had the most positive attitude. It was also found that the series was more likely to be viewed by Spanish-speaking Mexican-American pupils, and that increase in the use of Spanish by both Mexican-American and non-Mexican-American children was more likely to occur where the teachers were bilingual. Evidently, the use of bilingual

television programs is no substitute for the real thing!

(A summary of the formative research on Bilingual Children's Television, 1973; McCrae, 1972; Van Wart, 1974; and Williams, 1972.)

Videotaping and Microteaching:

With the increased availability of videotaping and playback equipment, video systems have been widely used in observations of teachers, either in pre-service or in-service training. Supervisors and training personnel have used videotapes of the teacher's own teaching performance as a stimulus for counseling and behavioral change. This has proven to be a most effective tool in many other contexts. At first, teachers are self-conscious and resentful at being videotaped. But if the tapes are used with the objective of improving professional skills, rather than a means of monitoring and evaluating teachers, this opposition soon passes. Teachers find they gain invaluable insights as they observe their own behaviors and engage in microteaching experiences. (Fuller & Baker, 1970; Hoerner, 1971; Owens & Kneedler, 1973; Staley, 1970; and Stern, 1970)

Computer Technology:

The most recent applications of technology in education have been related to the use of the computer. The extensive capability of the electronic brain offers vast potential for processing a wide variety of information. It has been used as both a teaching tool as well as a monitoring and record-keeping system. Computer-assisted instruction (CAI) is more prevalent in more advanced educational contexts, but programs for the teaching of first and second grade math and reading have already been developed and widely adopted. They have not demonstrated any significant difference in terms of achievement gains, but children do learn as well with the electronic system.

The ease with which computers can sequence behavioral objectives, produce items to test their acquisition, and maintain records of each

student's performance, greatly facilitates goal-oriented instruction. Another important benefit accruing from the use of computers, especially with disadvantaged students, is that the teacher is released from a great deal of repetitive rote and drill work. The computer permits the most effective form of individualized instruction, without the burden of testing, recording, and prescribing successive sets of drills. This has the further advantage of diminishing some of the negative attitudes of teachers toward students who require remedial training of this type.

In spite of its advantages, most teachers feel that computer applications do not merit their tremendous costs. Those who know computers and feel at home with them are apt to have more favorable attitudes. Even so, there is a general feeling that computer-based instruction produces a mechanical and impersonal learning environment. This is much more likely to be the complaint when computer-monitored instruction is used as the basis of guidance counselors' decisions.

(Allen & Gorth, 1969; Gipson, 1971; Hall, 1969; Long & Riedesel, 1967; Milne, 1973; Robardey, 1972; and Wightman, 1970.)

Organizational Innovations

The widespread dissatisfaction with the levels of learning achieved by students in the American public schools has led not only to an increased emphasis on changes in curriculum content and methods of presentation but also to a far greater willingness to initiate organizational innovation.

Regional Cooperation:

One trend has been that of broadening the base of educational control. Even as more and more autonomy is being given to teachers and students in local communities, there is a tendency to seek cooperation across town, city, and county boundaries, achieving solutions to educational

problems. Regional laboratories have fostered this open attitude. For example, the Appalachia Educational Laboratory (AEL) serves the needs of six states in that area. Convergence techniques at meetings of superintendents and teachers from the various local educational agencies focus on providing potential users of the materials developed by AEL an opportunity to participate in their development. This is particularly important in the Appalachia region, which has suffered notably from cultural and educational isolation. Basic skill centers have been set up for the more effective dissemination of new ideas and practices. These have been very favorably received by the teachers who have access to them. Additionally, close collaborations with local teacher-training institutions have been perceived as having an important impact on the improvement of education. (Campbell, 1971; Clark, 1972; Heller, 1972; Humphreys, 1970; Jacobson, 1974; and Short, 1971.)

Open Education:

Of all the organizational innovations, the adoption of the "Open Education" philosophy has generated the largest body of literature and received the most attention from current researchers. It should be noted, however, that the concepts of open education are far from new. There are few schools today that can claim greater innovative qualities than those expressed in "A Mother's Letters to a Schoolmaster," published in 1923, or Neill's more widely publicized account of the Summerhill experiment. Several excellent reviews and annotated bibliographies have traced the early roots of the open education movement (e.g., Cockburn, 1973; Doob, 1974; Newman, 1972; and Open Plan, 1970.) and there will be no attempt to review these materials here. Instead, the focus of this report is on the attitudes of teachers to the current applications of open education ideas.

The open education system, associated with the British primary school reforms, has been adopted by the Education Development Center. As one of the sponsors in the National Follow Through "Planned Variations" experiment, EDC brought open education into many communities across the United States. Because of the publicity accorded this approach, and because the concepts were so responsive to the recent emphasis on individualization, flexibility, and openness, many school systems attempted to introduce organizational innovations based on the open education philosophy.

There are conflicting reports of teacher attitudes toward open education. In the first place, it should be noted that the very openness of the model is conducive to a wide range of interpretations. These may be described on the bi-polar dimensions of high and low teacher and pupil control. The ideal concept of open education is one where there is a high level of control by the teacher and the students. Unfortunately, without adequate experience and training, the teacher may give over the educational reins to the children, abdicating the traditional teacher role. When this occurs, teachers express negative attitudes toward open education. Failure of the model is associated with inadequate preparation of teachers. It also follows when teachers, with quite alien concepts of teaching, are forced against their will, or skill, to institute procedures extremely at variance with ones they have been using for years. Under such conditions teachers become emotionally exhausted with the hustle and bustle in a classroom where children are actively pursuing their own interests. Inadequate implementation of the program and/or a high rate of teacher attrition often result.

Other criticisms of open education relate to the fact that teachers are predisposed to give more of their attention to the gifted students who are so talented and inventive. The child with learning problems falls by

the wayside, since alternatives which meet the need for drill and repetition are often not available. This criticism is not inherent in the model itself, but points up a much more cogent problem. The effective management of an open classroom requires a highly skilled teacher. Informal socialization is insufficient preparation for implementing open education goals. Continuous in-service training and effective leadership are essential. If these are not available, it would be far better not to attempt to install this model.

When open education is functioning well, it can be a most exciting educational experience for teachers and students. Teachers assume many roles: facilitator, supporter, resource person, diagnostician, and expert aide in the child's pursuit of knowledge. The effective teacher in this environment is actually the architect of the educational process. There is a greater sense of autonomy and feeling of control over planning and decision-making, with a concomitatant increase in job satisfaction. The constant exposure to researchers as well as visiting administrators arouse feelings of pride and fulfillment, as well as the desire for professional advancement.

Experimental comparisons of teachers in conventional and open school settings have demonstrated that the conventional teachers are more satisfied with their jobs. Closer inspection of the data reveals that open education teachers complain a lot. They would like to have better facilities and better sound-proofing so that the noise level would not be disturbing to the activities of individual students. They would like to have more time for individual students, as well. But they would <u>not</u> like to return to teaching in the conventional school room.

(Amarel, 1973; Andreae, 1970; Barth, 1972; Brunetti, 1971; Bussis & Chittenden, 1970; Dillon & Franks, 1974; Elofson, 1973; Evaluation of

Innovative schools, 1972; Geiser, 1974; Hersom, 1971; Kyzar, 1972; Gibboney & Lansdorf, 1972; McCauley, 1972; McLoughlin, 1973; Meyer, 1971; Mickey & Lawrence, 1972; Nasca, 1973; Prichard & Moodie, 1971; Reschly & Sabers, 1972; Rothwell, 1973; Schwer, 1973; SEF - Academic evaluation, 1972; Shaw, 1971; Staley, 1974; Wlocarczyk, 1972; and Zimmerman, 1971.)

Scheduling:

Another area in which there has been a great deal of innovative activity is that of scheduling. In this category would be included the extensive literature on reorganizing the school year. (Cf. Holzman, 1971; Nygaard, 1974; and Schmid, 1971.) The majority of studies seem to favor the 45-15 plan: nine-week programs (45 days) followed by a three-week (15 day) vacation period. The schedule is staggered so that only three-fourths of the student body are in school at any one time. Most evaluations are impressed with the economic advantages offered by this plan. There is an immediate 33% increase in classrooms available; educational benefits accrue when overcrowding or double-shifting is prevented, and teachers receive year-round salaries. Physical and human resources are used more effectively, and there is greater flexibility.

But there are many problems associated with year-round schooling. Keeping four streams of students in coordinated curricular sequences requires extremely careful juggling. A great deal of reliance must be placed on strong administrative support, and at least a year of advance planning is recommended. The student rotation system also poses many difficulties in developing season-oriented sports programs and other curricular activities. Although many teachers are attracted by the 12-month salary schedule, and administrators by the budgetary savings possible by year-round utilization of facilities, the far-reaching effects require more than school-based

support. Major changes in work and vacation habits of the total community are necessary for successful implementation of this drastic departure from the conventional school year.

Other scheduling innovations involve changing the length of the school day, overlapping sessions, and, for kindergarteners, fewer and longer school days. At the high school level, modular scheduling permits students to share in determining their own learning experiences and to have greater freedom to leave the campus when they are not in class. In a survey of teacher attitudes toward modular scheduling, 85% preferred the modular system over the traditional schedule. There was also much more effective use of media and resource centers.

(Bentley, 1969; Boxer, 1971; DeGregorio, 1973; Double shift evaluation, 1971; Ernst, 1971; Evans, 1970, 1971; Gove, 1971; Henson, 1970; Holzman, 1971; Johnson, 1972; Johnson & Gondek, 1972; Kindergarten evaluation study, 1972; Lahaderne, 1972; Maggio, 1973; McKinley High School quarter system, 1971; Moodie, 1971; Nygaard, 1974; Proceedings: National seminar on year-round education, 1972; Raichle, 1972; Schmid, 1971; Warden, 1969; Webb, 1973; Welch, 1971; Year-round schools: the 45-15 plan, 1971.)

Other Organizational Innovations:

There are a number of other organizational innovations which have been reported in the recent literature. These have to do with differenia-ted staffing, cross-age tutoring, multi-age classes (not part of non-graded school programs), team teaching, and class size. As with all other types of innovations, teacher attitudes are a critical variable in successful implementation. Thos who report studies are usually advocates of the innovation explored, and their findings generally report positive trends. But

the populations of the study and other design problems leave grave doubts as to their generalizability. Attempts to determine the personality characteristics of the accepting vs. the rejecting implementer are also rather inconclusive. If any broad statement can be made, it is to reiterate that the success of any innovation is dependent upon the dedication and conviction of the teacher. It is the teacher who, in almost all cases, is the critical change agent.

(Charters, 1973; Cook & Blessing, 1971; Eiseman & Lippitt, 1966; English, 1971; Essig, 1972; Gallessich, 1971; Gallessich & Iscoe, 1972; Hoen, 1972; Lehman, 1972; Shapson, 1972; and, Shaw, Strabel, & Reynolds, 1973.)

CHAPTER VI - PROFESSIONAL ORIENTATION

In addition to the variety of attitudes discussed in the previous chapters, teachers have pereeptions and feelings about other aspects of their professional lives which affect their teaching performance. Several of such attitude objects have been grouped together under the general rubric of "Professional Orientation." Among these are attitudes toward aspects of the work environment, such as the organizational structure or climate of the school and school system, and the physical attributes of the work setting. How the teacher perceives and relates to professional associates, students, parents, and the community at large also involve attitudes which are of critical importance to the teacher role. The chapter also explores the role perceptions of teachers, and other variables (for example, evaluative functions and openness to research findings), which contribute to job satisfaction and willingness to continue as a teacher.

Although personality traits are not attitudinal variables, they may provide the basis for assuming a certain stance toward an attitude object. Furthermore, in addition to providing the setting conditions for attitude formation, they are frequently used by researchers in correlational studies of teacher attitudes. For these reasons, the first section of this chapter deals with teacher personality.

Personality Variables

There is a persuasive face validity to the assumption that the teacher's personality is related to teaching style and effectiveness. It is undoubtedly true that the teacher is a significant variable in the classroom. Over the past 50 years, a great many investigators have attempted

to study teacher characteristics as they relate to teaching effectiveness. In an excellent chapter on this topic, Getzels and Jackson (1963) noted that there were many more studies than could be covered adequately in their interpretive review. They cited three bibliographies which surveyed the field prior to 1950. One of these alone listed over 1,000 titles. For their review, Getzels and Jackson compiled 800 references published since then. Their analysis is so thorough and perceptive that it would indeed be superfluous to attempt to cover the same ground again.

The research employing the Minnesota Teacher Attitude Inventory (MTAI) has been primarily concerned with measuring "those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships, and indirectly, how well satisfied he will be with teaching as a vocation." (Cook, Leeds, & Callis, 1951, p.3) Other personality inventories have been used to assess teacher attitude dimensions in terms of psychological characteristics. These include the Minnesota Multiphasic Personality Inventory (MMPI), Guilford-Zimmerman Temperament Survey (GZTS), Kuder Preference Record, Thurstone Temperament Schedule, California F Scale (Adorno, Frenkel-Brunswik, Levinson, & Stanford), Allport-Vernon-Lindzey (AVL) Study of Values, Strong Vocational Interest Blank, Edwards Personal Preference Schedule (EPPS), many adaptations of these measures, and numerous procedures developed for specific research studies.

A formidable body of work has been concerned with the MMPI. Buros (1959) reported 780 references, and Getzels & Jackson note that additional titles are appearing at the rate of 100 items per year. But after a very careful analysis of a wide range of studies using the MMPI and other personality tests, Getzels and Jackson regretfully conclude:

> Despite the critical importance of the problem and a half-century of prodigious research effort, very little is known for certain about the nature and measurement of teacher personality, or about the relation between

> teacher personality and teacher effectiveness... For example, it is said...that good teachers are friendly, cheerful, sympathetic, and morally virtuous rather than cruel, depressed, unsympathetic, and morally depraved. But when this has been said, not very much that is especially useful has been revealed. For what conceivable human interaction...is not the better if the people involved are friendly, cheerful, sympathetic, and virtuous rather than the opposite? What is needed is not research leading to the reiteration of the self-evident, but to the discovery of specific and distinctive features of teacher personality and of the effective teacher. (P. 576)

In addition to the criticism related to the flaccidity of the findings, two other important points should be made. To begin with, evaluations which attempt to relate desirable and undesirable character traits to effective and ineffective teachers usually lack specificity. For rarely does the researcher establish the basis for defining certain traits as "desirable" or certain teachers as "effective." Most investigators depend on ratings by principals, supervisors, or other "experts," who themselves are susceptible to personal preference biases, for both types of judgments. But in the studies reported, these are seldom related to student outcomes.

Since the Getzels and Jackson review, no new breakthroughs have occurred. In his analysis of the same research area published almost a decade later, Lomax (1972) also concludes that very little is known about the relationship between personality characteristics and teacher effectiveness.

Rather than causing practitioners to throw up their hands in despair at finding any meaningful guidance from research, these studies can be seen as making an extremely important contribution. In addition to validating many commonsensical concepts concerning the importance of teacher attitudes, they also, either directly or by implication, point up the inutility of applying global personality traits to a generic concept of "teaching."

If nothing else can be concluded from the multiplicity of studies, it is certainly safe to say that all teachers do not have the same effects on all students. Certain teacher characteristics which may be appropriate with the very young child may not be at all "effective" at the high school, or even middle school, level. Characteristics of dogmatism, rigidity, tender- or tough-mindedness, or even degree of hypochrondiasis, psychasthenia, or schizophrenia, may have different meanings at different grade levels or in different school environments. Thus, contradictory findings do not necessarily imply a lack of validity in the measures, or inadequacy in the experimental designs. To profit from research, educators must be able to define the parameters of their own particular educational environments.

The monumental study carried out by Ryans (1960) offers a number of useful cues for perceiving relationships among patterns of teacher behavior, demographic variables, and specific teaching situations. The Teacher Characteristics Schedule, developed during the course of this investigation, yielded scores on a variety of dimensions: warmth, responsibility in planning instruction, creativity, opinions of pupils, classroom procedures and administrative personnel, focus on subject matter or child development, verbal facility, and emotional stability. In addition, protocols obtained information on demographic variables, such as age, experience, education, sex, marital status, and motivation for selecting teaching as a profession. Information was also collected on characteristics of the school environment, and evaluations of teaching procedures were obtained through classroom observations.

Over the six-year-period of the Teacher Characteristics Study, about 100 separate investigations were completed, involving over 6,000 teachers, 1700 schools, and 470 different school systems. The findings are

too numerous to be reported here in any detailed fashion. But it is comforting to find evidence that teachers' behavior patterns do have differential implications. For example, the warm, planful, imaginative teacher behaviors were closely correlated with student behavior for elementary, but not for secondary teachers. Married elementary teachers were apt to demonstrate higher scores on the positive poles than did single elementary teachers, but the pattern was reversed for secondary teachers. Furthermore, the attitudes of elementary teachers toward pupils, professional colleagues, and administrative personnel were significantly more favorable than those of the secondary teachers. The latter group was apt to demonstrate more traditional, subject matter orientations and to have significantly higher scores in verbal facility. Both elementary and secondary male teachers were more stable than female teachers at either level. Teachers in self-contained classrooms are more concerned with the growing child whereas teachers of special subjects are concerned with having their students acquire knowledge of the course content. This parallels findings on elementary and secondary teachers, since self-contained classrooms are typical of the lower grades and secondary teachers usually teach specific subjects.

The data from other investigations indicate that unmarried female teachers are more aware of the personality characteristics of pupils than are married female teachers, or male teachers as a group, whether married or single. Teachers high in student awareness report a greater interest in the child's out-of-school experiences, whereas teachers low in student awareness are more concerned with in-school activities and prefer a more traditional approach to teaching.

Differences in teacher behaviors and attitudes are often associated with age, but the directions are not always consistent. For instance,

some studies have indicated that teachers over the age of 50 are more "tough-minded" than all other groups. Other research has found that teachers over 40 are more liberal in their attitudes toward discipline than teachers under 27 years of age. Sampling methods and instrumentation used in the studies would probably account for these seeming discrepancies.

A more recent investigation, using the Ryans' approach, looked at a random sample of 3248 teachers in the continental United States and 304 teachers from Hawaii. The objective was to determine the relationship of childhood financial status and cultural background, using 19 scales derived from the Teacher Characterisitics Schedule. The data from this study indicated that teachers from above-average financial background scored higher in imagination, originality, verbal facility, logic, and insightful judgment. Those from average economic level homes were highest in work and conformance scores, and those from low income homes, lowest. Teachers from the high and low groups were apt to be higher in innovation, change, and liberalism than the middle economic group.

Another study concerned with the social antecedents of teacher attitudes also surveyed a large (3584) sample of midwestern teachers. A strong relationship was found between both age and number of years of teaching experience and a positive teacher attitude. But there was little evidence that teacher attitudes were influenced by the educational background of the teacher. Nor, and this is most important, was there any demonstrated relationship between attitudinal or demographic variables of the teacher and classroom behavior or test performance of the students in any of the references cited below.

(Burson, 1972; Carter, 1969; Coletta, 1973; David, 1972; Garrison, 1972; Getzels & Jackson, 1963; Gitlitz, 1973; Grapko, 1971; Khan & Weiss,

1972; Larimore, 1969; Lomax, 1972; Mayes, 1972; McKee, 1971; Ryans, 1960, 1972, 1973; Starkey, 1972; White, 1973; Whitmore, 1974; and Yamamoto & Davis, 1966.)

Belief systems have been studied by some investigators as a separate aspect of teacher personality. Ratings are based on questionnaires, such as the Rokeach Dogmatism Scale, and other belief measures. A major belief structure is described in terms of rigidity, authoritarianism, traditionalism, conservatism, closed-mindedness, and dogmatism. Teachers obtaining high scores on these dimensions tend to be subject-oriented, punitive, controlling, and concrete in their approach to teaching. The contrasting belief system would be described in terms of flexibility, liberalism, child orientation, individualization, and progressiveness. Teachers of this type would be more resourceful, non-punitive, non-dictatorial, more accepting, and abstract in their orientation. The former group are more reluctant to participate in an innovative educational program than the latter. While these trends have appeared in some studies, research has not established an unequivocal connection between beliefs and experimental or non-experimental practices. Although there is a positive correlation between liberal political beliefs and attitudes toward inclusion of Black Studies in the curriculum, there is no meaningful interrelationship between such attitudes and beliefs and the Rokeach Dogmatism score. In essence, there is no statistically reliable relationship between personality and belief structures and the teacher's classroom behavior.

(Coates, 1972; Harvey, Prather, White, & Hoffmeister, 1967; and Reynolds, 1972.)

Characteristics of Successful Teachers

If it were possible to identify the characteristics and behaviors which make for a successful teacher, a great deal of wasted time, effort,

and expense could be avoided. For example, one study reported that, of 150 student teachers, only 84 were teaching full time two years after completion of their training. Thus, the incentive for much of the research on teacher personality and characteristics is related to the need to predict the teacher trainee or candidate who will actually persist in this profession. Many researchers have addressed the question of prediction in a more direct fashion. They have found that those who drop out of teaching have less favorable attitudes toward teaching and are unable to establish good rapport with their students. It has also been noted that the central foci of teacher training should be personality issues, such as dogmatism, pupil control procedures, and affectional need, rather than pedagogical facility. Attitudinal variables are considered more important than demographic or school factors.

Personality instruments have often been used to describe the successful teacher, with inconsistent results. Selected teacher characteristics, as measured by Rokeach Dogmatism Scale, AVL Study of Values, Kerlinger's Education Scale VII, and Edward's Personality Inventory, have not provided sufficient basis for predicting teacher effectiveness as measured by student performance on achievement tests. A research study was conducted to determine whether discrepant or negative findings could be attributed to a differential match between teacher and student characteristics. Using the California F Scale as a measure of authoritarianism, the investigators obtained evidence that students who received high F scores did not relate well to teachers with low F scores, and students with low F scores did not relate well to teachers with high F scores. Under these mis-match conditions, students received lower grades than did students who were more like their teachers.

(Klein, 1971; Krasno, 1972; Passmore, 1971; Skipper, 1970; Stevens

1972; and Weiss, Sales, & Bode, 1970.)

Comparisons of Student Teachers, Beginning Teachers, and Experienced Teachers

Another approach to the identification of the optimum teacher candidate is to compare groups who are at different points in their careers. In general, very little change over time has been reported. Some significant differences were found on scores of three MTAI categories at the beginning and the end of pre-service training. There was a significant difference on all four of the MTAI categories, with the beginning teachers receiving higher scores compared to experienced teachers. Other research seems to confirm that attitudes become more negative after teaching experience, but even so, attitude changes are likely to be on an individual basis. Although more experienced teachers are rated as more effective by professional judges, no significant difference in performance of students with experienced or beginning teachers has been reported.

Beginning teachers who find positions in innovative, open programs, show less change than those who go into traditional schools. There is good evidence to show that beginning teachers become less like their training professors and more like the peers in their teaching environments. Beginning teachers tend to see the principal and faculty of their school as much more authoritarian than is the case. Their perception of authoritarianism in others is closely related to their own patterns of behavior. That is, the more authoritarian the teacher is at the beginning of the teaching experience, the less increment will occur over the beginning teaching year.

The acculturation of the beginning teacher into the social institution of the school has been compared to the assimilation patterns of immigrants. The new teacher is seen as moving from membership in one social structure, i.e., the student culture, into one requiring a complete role

reversal. The need to adapt to and cope with the new social environment may precipitate role strain and require a new concept of self. The nature of the new teacher's relationships with significant others influences the direction the teacher will take in terms of professional autonomy or dependence.

(Ayres, 1972; Coulter & Taft, 1973; Edgar & Brod, 1970; Foster, 1971; Gillespie, 1971; Homuth & Deutscher, 1969; Hopkins, 1970; Jennings, 1971; Johnson, 1971; Johnson, 1972; Krchniak & Helsel, 1971; Lang, 1972; McClure & Barcikowski, 1972; Newlove, 1969; Skinner, 1971; and Wiersma, 1971.)

Selection

For the administrator, the examination of teacher characteristics is particularly important as a source of guidance in the employment of personnel and their allocation to appropriate teaching assignments. Quite understandably, principals are attracted to teachers who share their own attitudes and beliefs. They are apt to hire such teachers even though another person with discrepant attitudes is actually more highly qualified.

In the selection of candidates for teacher training, it has been recommended that preference be given to applicants who are: "Child focusers, pragmatists, task focusers, and perhaps contented conformists." These criteria may be viewed as somewhat suspect, since the attitudes teacher trainees express at the end of their teacher training experiences are far from congruent with the beliefs and behaviors most prized by principals and administrators. Furthermore, affective, interpersonal skills are often ignored, although there is evidence that these are extremely crucial in creating student-teacher rapport. Compared to pedagogical techniques and subject matter competence, dedication and commitment to teaching carry less weight,

most especially in the selection of secondary teachers.

Somewhat contradicatory findings were reported in a study of the functional competencies needed by industrial arts instructors. In this survey of teachers and supervisors in the United States and Canada it was found that personal qualities and behavioral characteristics were rated as the most important selection factors. Moreover, competencies in teaching methods and techniques were rated more important than competencies in course content. Perhaps there is an underlying assumption that all the vocational arts instructors will have sufficient skill in their trades to be able to teach high school students. With this variable held constant, it is understandable that personal characteristics and teaching techniques receive greater emphasis.

Administrators frequently have to make decisions as to which persons will be likely to do best in a particular innovation being introduced into a school. To provide this type of information, the relationships between innovative behaviors and selected attitudes, perceptions, and personality characteristics have been examined by a number of researchers. Those who have been designated as being high in innovativeness generally perceive the community as being supportive of change. They like the school in which they teach, perceive resource personnel as creative and helpful, do not feel constrained by traditions and rules, and perceive themselves as being influential in the teaching role. They are less dogmatic, less conservative, and more cosmopolitan. They are also apt to have received better grades in school themselves and to have greater language facility.

Attempts have been made to create screening instruments to aid in teacher selection. While many of these have been able to distinguish between teachers rated as effective or ineffective, in general they have demonstrated

very little predictive validity.

(Campbell, 1973; Clark, 1973; Coil, 1969; De Witt, 1973; Jones, 1972; Lesher & Wade, 1972; Marker, 1970; Merritt, 1971; Miller, 1971; O'Hanlon, 1973; Oldroyd, 1973; Olmsted, 1974; Russell, 1971, 1972; and Savage, 1970.)

Role Perceptions

The sociologist who focuses on the role of the teacher is concerned with all the social and cultural forces which affect how teachers perform in the learning-teaching process, within the context of the school. A most scholarly treatment of the broad bases of role development is provided by Charters (1963), in his 100 page review of research on the social background of teaching. The present section focuses specifically on the teacher's attitude toward and perceptions of the teaching role.

In colonial times, teachers were among the group of workers drawn from the pool of indentured servants. Since they were not perceived as productive, they did not command as high a price as a shoemaker, carpenter, or baker. Furthermore, teaching was not considered a full-time occupation, and even today, over half the male teachers supplement their incomes by "moonlighting." Over the course of years, there has been some improvement in status, but teachers have internalized many of the values implicit in a society which pays street cleaners almost twice the salary of the average elementary school teacher.

It is thus not surprising that teachers look with disdain on their own profession. Many of them reject group membership and refuse to identify with their colleagues. There is a tendency to minimize the value of education and education courses, and to assume a cynical attitude toward teaching,

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the school system, and educational ideals generally. When asked to rank teaching among other professions, teachers are apt to assign themselves a lower rating than they are accorded by other more impartial judges.

Although this may be changing, there is evidence that many teachers think teaching is a low-status profession. Where prestige is low, teachers lack motivation for performing the teaching functions at their optimum levels. Under low-status perceptions, teachers lack the independence and authority so essential for maintaining the respect and esteem of the students. Depressed role perceptions lead to personal problems similar to those faced by members of minority groups. They diminish the teacher's ability to cope with the frustrations of normal living, as well as the professional job functions. Many teachers feel that teaching is a profession which merits higher salary and status than it receives. As this feeling of discrepancy increases, so does job dissatisfaction. This reinforces alienation from teaching and provides a major basis for the high rate of teacher attrition. But it must be pointed out here, as in other contexts, that no investigation has established the relationship between low job satisfaction, or low teacher prestige, and teacher performance in the classroom.

In general, teachers are drawn from the middle ranges of socio-economic levels. But even those who have moved up out of low income homes have adopted the value system of the middle class. These provide the background of expectations which govern teacher evaluations of students, often placing minority children at a distinct disadvantage. It should be noted, however, that revised methods of recruitment of teachers over the past 10 years have effected major changes in the composition of the teaching profession.

There are other features of teacher role perceptions that must be looked at analytically, rather than globally. For example, it is quite

obvious that teaching cannot be considered a unitary concept or profession. When teaching tasks and grade levels are broken out into separate categories, there are distinct differences in the prestige with which they are perceived. Superintendents, principals, and specialists (e.g., psychometrician, counselor, reading consultant, etc.) are usually perceived as having higher status than classroom teaching.

Within the teaching hierarchy, prestige proceeds up the grades, with nursery and preschool teachers ranking lowest, and college professors who teach mainly graduate students, highest. There are also status differences relating to whether teachers are tenured or non-tenured, or whether they are paid with "hard money" from established school districts, or the "soft money" of federal projects and grants. The location of the school is another factor in establishing prestige: teachers in suburban, middle class schools have a perceived status considerably higher than that of the teacher in the inner city school.

The way in which teachers perceive their role functions is dependent upon their own personal backgrounds as well as the demands of the school and the educational philosophy of the program they are expected to deliver. These role distinctions are particularly characteristic of the programs provided under the Planned Variations experiments of Head Start and Follow Through. Depending upon the particular model adopted by the school, the teaching role may resemble that of the mother, therapist, facilitator, or instructor. The role perceptions held by the teacher influence the types of experiences which are provided the children in the classroom.

New teachers acquire perceptions of their teaching roles through the process of socialization. That is, they acquire the values, attitudes, interests, skills, and knowledge of the group to which they will become

affiliated. The transition from college student to that of teacher may induce a form of culture shock, requiring a drastic role reversal. The new teacher must leave the relative freedom and sociability of student life and accept the restrictions and responsibility of a considerably more conservative environment. More research is needed to attain better understanding of the effect of the training experience on the teacher trainee. A great deal more attention must be given to clarifying occupational goals and aspirations so as to provide a deeper sense of purpose and self-esteem. There must be greater emphasis on inculcating a more positive teacher role perception.

(Beak, 1969; Biddle, 1969; Capelli, 1973; Charters, 1963; Cohen, Mirels, & Swebel, 1972; Dolan, 1971; Franc, 1970; Franklin, 1972; Katz, 1970; Keith, 1970; Lightfoot, 1973; Lindgren & Singer, 1963; Miller, 1967; Moffatt, 1972; Moses, 1971; Ryan & Hickox, 1972; Sabine, 1971; Shaw, 1973; Sims, 1971; Tammen, 1971; Tippie, 1973; Victor & Harootunian, 1971; Wehling & Charters, 1969; and Wright, 1973.)

Decision-Making

There are several other attitude objects which could logically be included in the category of role perceptions, but they have received so much research attention that they merit individual treatment. One of these relates to the question of the roles teachers play in both broad, community-based policy making, and in the day-to-day decisions in their own classrooms.

Although there has been a great deal written and argued about the importance of democratizing educational policy-making, it should not be assumed that the desire for this type of power beats equally strongly in every teacher's breast. For example, high school teachers, in an up-state

New York survey, were willing to take responsibility for their daily professional duties, especially grading policies, but were not interested in becoming involved in non-instructional decisions. They did not want to take on the work or responsibility for setting up the school calendar, assigning students to programs and classes, or managing extracurricular activities. But they did not want "lay" people, which is how members of school boards are characterized, making such decisions for them. These attitudes were expressed by teachers generally, and were not affected by demographic factors such as sex, age, years of teaching experience, or type of educational preparation.

Members of school boards are the most traditional of all the participants in the school-community hierarchy and can usually be expected to oppose change. This is even more true in small, rural communities. Here the board members do not have the anonymity necessary to go against the local economic power structure, which has assured their election and which holds the mortgages on their small businesses or farms. Still less are low-status teachers apt to bring in and support policies representative of recent educational innovations. For there is actually little discrepancy between the local teacher and the community. Administrators and teachers in rural areas are themselves products of the rural subculture. They reflect the attitudes of the community in which they work, where the major function of the school is to inculcate the mores and verities of the establishment, rather than to serve as an agent of social change.

Except for the ferment characteristic of depressed areas and minority populations generally, innovations in educational policy-making decisions stem from legislative actions initiated outside of the local community. Almost always the power to effect the change is under the control of those whose

authority will ultimately be infringed by the innovation. Administrators, board members, and often even the most experienced teachers, resist change. In such cases, it is often necessary to bring in change agents and to institute training programs which will assist administrators and teachers to assume new role functions.

One researcher, reporting such a program, presents a theoretical model for intervention in building decision-making potential. The training program focuses on work roles and relationships, job function analysis, authority and communication patterns, and provides a strategy for superimposing collective decisions on the existing authority structure of the school. Internal evaluation of this effort indicated that there was a significant, favorable change in the attitudes of the faculty toward collective decision-making. But other efforts, employing different change procedures, have reported equivocal results.

In addition to changes in the teacher's decision-making role, there has been considerable attention given to the notion of student participation in educational decisions which affect the nature and content of their schooling. Of concern here is how teachers feel about this threat to their traditional authority in the classroom. Research generally shows a great deal of diversity in the attitudes of teachers with reference to student participation in decision-making. While there is more likely to be consensus in seeing students as having participatory rights in extracurricular areas, teachers rarely want to share academic or instructional authority. Teachers do not feel that students should have as much voice as the students think they should, but they also overestimate the extent to which students are currently involved in decision-making processes.

(Coughlan, 1972; Cronkite, 1973; Ford, 1971; Hughes & Spence, 1971:

Hummel & Cox, 1970; Lynch, 1971; McClure, 1973; McGuinness & Masters, 1973; McPartland, 1971; Molner, 1972; Startup & Gruneberg, 1973; and Traylor, 1969.)

Pupil Control Ideology

Two complementary threads have come together in a relatively new approach to the study of teacher characteristics and behavior. The first stems from the fact that over the course of 50 years of research on teacher personality variables, little attention has been paid to classroom behaviors of teachers and their effects on the growth and achievement of the children. The second thread is drawn from the increasing need to deal with those behavior and discipline problems which make it well-nigh impossible for any instructional model to function effectively in the classroom.

The theoretical basis postulates that pupil control ideology serves as an intervening variable, translating personality variables of dogmatism and closed-mindedness into pupil control behavior. This behavior is conceptualized as a continuum, ranging from custodialism to humanism. A high score on the Pupil Control Ideology (PCI) measure is related to a high degree of custodialism. At this pole, the students are viewed as being irresponsible, undisciplined, and needing strictness and punishment. At the humanist, or low score end, students are seen as capable of self-discipline; they are deemed worthy of a high degree of autonomy, and encouraged in exploration and verbal initiation. Low scorers on the PCI are also most receptive to innovative programs involving increased openness and informal structures.

Pupil control ideology is an important concept not only because it offers insights into the association between teacher characteristics and classroom behavior, but also because it stresses the relationship between what the teacher does and how the students respond to the teacher's

characteristic control patterns. In a major investigation, the PCI was used to identify 10 teachers who had high and 10 with low scores. A series of observations, using the Flanders interaction system, was carried out. The data verified the fact that humanist teachers were more accepting and developing of student ideas whereas custodial teachers were more apt to lecture and give facts and opinions. In addition, the students of humanist-oriented staff were significantly more productive of verbal initiations. Although the final step of evaluation in terms of student achievement scores has not been reported, the PCI seems to be able to predict the extent to which certain types will present these pupil control behaviors in the classroom.

(Appleberry, 1971; Dobson, Goldenberg, & Elsom, 1972; Goldenberg, 1971; Fitch, 1972; Helsel, 1971, 1974; Hoy, 1967; Hoy & Blankenship, 1972; Janze, Beeken, & Hritzuk, 1973; Longo, 1972; Queer, 1971; Rexford, Willower, & Lynch, 1972; Willower & Packard, 1972; and Yuskiewicz & Donaldson, 1972.)

Job Satisfaction

Approximately 30% of graduating student teachers do not enter the teaching profession. Of the 70% who do take teaching positions, about 12% leave their jobs at the end of the first year, and 50% are no longer in school posts at the end of two years. One-fourth of all the teachers in teaching jobs have taught for less than four years.

These unfortunate statistics are indicative of a deep-seated dissatisfaction with teaching as a profession. Some of the causes of this condition may be traced to the historical roots of low teacher prestige, mentioned earlier. More specifically, beginning teachers often feel inadequately prepared to withstand the rigors of teaching, nor are they able to contend with the bureaucratic rigidity which characterizes most school systems.

These negative features are too infrequently offset by meaningful rewards and appreciation for the amount of effort expended. Nor are there many opportunities for advancement for capable and ambitious teachers.

A study of beginning teachers to determine which characteristics discriminate the "stayers" from the "leavers" revealed that women teachers were less likely to leave teaching than were men. Those who stayed in the schools were more apt to be education majors with more courses in education. They chose teaching as a career earlier, required more structure in their lives, and came from blue-collar homes. In general, men teachers placed greater importance than women on status, salary, and opportunity for advancement.

Unfortunately, demographic variables cannot be safely used as guidelines either in the selection of teachers by administrators or by teacher training institutions in identifying the most appropriate student trainees. There are, however, certain morale factors within the teaching-learning context which do have predictive utility. Across a wide range of research, these variables, which can precipitate either job satisfaction or dissatisfaction, appear over and over again.

Among the most important determinants of morale are those which have to do with the content of teaching. One research study reports that 40% of the variability in job satisfaction can be accounted for by internal reward variables. Of highest priority for many teachers is the need to feel a sense of achievement, that they are accomplishing their educational goals for their students. This is the challenge which teachers need and enjoy. But where there are frequent discipline problems which impede instruction, and where students are perceived as having low potential for learning, the teacher's level of satisfaction is diminished.

Another important source of satisfaction derives from on-the-job

human relationships. For example, it has been demonstrated that the teaching sub-culture can insulate teachers even in the most unpleasant environment, and make it possible, even desirable, to continue in that setting. Rapport with teacher-peers can be more influential in establishing job satisfaction than the social level of the community, the geographic region in which the school is located,or the backgrounds and educational achievement of the students, although these are important, too.

An essential component of profesaional rapport relates to the type of leadership provided by the principal and supervisory personnel. Leadership which imposes a heavy work load and excess pressure on teachers, which does not permit teachers to participate in decision-making, and insists on maintaining a curriculum which teachers feel is inappropriate for their students, can seriously impair morale. The requirement to attend faculty meetings at which regulations are communicated but nothing useful (from the practical point of view) is learned, also produces a negative effect. All these features, which go to make up the climate of teaching, are so important that they are discussed separately under the heading of Work Environment.

What have been called "context variables", although not quite as important as the immediate content of teaching, cannot be disregarded. Until a salary level has been achieved, enabling teachers to enjoy a standard of living which approximates their status expectations, salary can be a critical factor. Fringe benefits are also important. Surprising as this may seem, many of the nation's teachers are not covered by Social Security, but rather by local or State retirement plans. When teachers lose their jobs, they are not automatically entitled to unemployment insurance payments, as are most white-collar employees. In situations where this is true, it can create serious job dissatisfaction. Arrangements for sick leave are also made on a

local basis. Although most teachers (95% in one study) would be satisfied with 15 days per year, this is not automatically granted to all teachers. And in some cases, teachers have to pay the salaries of substitutes when they are forced to be absent.

In addition to low salary and inadequate fringe benefits, a stark and depressing physical environment and lack of modern instructional equipment may affect teacher morale. These variables are discussed more fully under the rubric of Work Environment.

Dissatisfied teachers cannot be effective in the classroom. They leave teaching as soon as another opportunity comes along, and if they don't find other employment, they are the sources of militancy and union conflict. But even more important in terms of maintaining an effective school system is the fact that if the administrator can pinpoint the conditions causing the problems, a number of remedies are available. Some of the suggestions for improving teacher morale include: 1) At the pre-service level, student interns should be given a realistic view of the teaching profession; 2) Supervision should be addressed to guiding and assisting teachers, rather than in judging and evaluating. Although teachers feel evaluation is necessary, they would prefer this function to be on an open and regular basis, rather than "unobtrusive" and surreptitious observations; 3) Parents and teachers should be included, and work together, in the decision-making process; 4) There should be more flexible staffing schedules; and, 5) Teachers who have not been exposed to courses in interpersonal communication should be provided with in-service training in human relations.

(Arikado & Musella, 1973; Bodard, 1970; Castiglione, 1968; Cohen, 1971; Coughlan, 1971; Fitzgerald, 1972, 1973; Gregorc, 1971; Greenwood & Soar, 1973; Kenen, 1971; Lacy, 1968; Lee, 1972; Martin, 1971; Miskel, 1972;

Price, 1971; Silva, 1973; Sommers, 1969; Throop, 1971; Watson, 1971: Wickstrom, 1971; and Yuskiewicz & Willower, 1973.)

Militancy

Closely related to job satisfaction is the issue of militancy. This is a generalized phenomenon across different professions, consistently related to frustrated career aspirations. While teacher unionization is no longer rare, it is often precipitated by one or more of the conditions which undermine teacher morale. Studies dealing specifically with militancy and unionization confirm that a high degree of dissatisfaction with both intrinsic and extrinsic job factors, and a high risk-taking propensity, are significantly related to a teacher's decision to strike. Militancy is thus perceived as an imbalance between what the school demands from the teacher in terms of role performance and what it gives the teacher in terms of need satisfaction.

Generally, teachers feel that they should have the right to strike without incurring penalties or other sanctions. But they do not believe that strike action should be taken except as a last resort. Teachers are a more potent political force today than they were even as recently as 10 years ago, and they are no longer willing to abrogate their political rights. Involvement of teachers in political action is above the average for the general population. Yet, many teachers feel that teacher organizations should not become involved in political issues unless they are related to education.

There is a significant correlation between the perceived needs of teachers and militancy. Work benefits are influential when there has been a high degree of deprivation. When lower order needs, e.g., security,

salary, and sick leave, have been satisfied, then higher order needs such as self-fulfillment, professional status, and work satisfaction are accorded greater priority.

Summarizing across a number of surveys, the following attitudes have frequently been found to be characteristic of the militant teacher: 1) a marked lack of confidence in the administration; 2) lack of support for the principal; 3) a pessimistic view of the education enterprise as a whole; 4) a strong desire to institute thorough-going changes; 5) the conviction that unions are a potent force to effect such a change; and, 6) a desire to assume an active role in initiating change and determining broad educational policies.

Thus, teachers who favor strikes are generally dissatisfied with their jobs, feel that they are underpaid, are unfairly treated by the administration, and are inadequately supported by the community. They tend to believe that the purpose of education is to promote social change, and they particularly want to change the quality and functions of administration. These teachers are pressing for a more active role in what has traditionally been considered the province of supervisory personnel.

Increased militancy reflects the increased democratization of the teaching profession. Federal programs which provide career development opportunities for poverty populations have brought into teaching members of groups whose backgrounds predispose a favorable attitude toward militancy. There has been, for example, an appreciable increase in the number of black teachers. While these teachers tend to be more militant, and believe that teachers should be in the forefront in the fight against illiteracy and poverty, they do not advocate violent change.

While demographic and attitudinal variables are generally considered poor predictors of attitudes toward union negotiations and militancy,

there are findings with specific study populations which may offer some insights. For example, a study of teachers in California indicates that those in the northern part of the State, and males from low income families, are most militant. Physical education teachers and those from Southern California are most conservative.

The level of union activity increases with grade and years of experience. Older teachers may be less likely to take the initiative in unionization, but they tend to be supportive of collective negotiations once they are under way. The biggest difference in attitudes toward unions is between male secondary teachers and female elementary teachers, with the latter group most traditional and opposed to unions. However, this may be confounded by the fact that most elementary teachers are female. Thus it could be the grade level rather than the sex of the teacher which is the critical factor. Other studies indicate that women are just as likely to be militant as men. Another interesting finding is that urban teachers and older teachers are most sympathetic to militant teacher organizations.

A number of investigators have been interested in studying the differences in teachers who affiliate with the National Education Association (NEA) as contrasted with those who join the American Federation of Teachers (AFT). Schools whose teachers have affiliated with one or the other of these organizations do not differ significantly in their demographic features. But they do differ in terms of their attitudes toward unions.

NEA affiliated teachers give teaching a higher prestige rating than do AFT teachers. NEA teachers are more likely to identify with the middle and upper social classes, and to have more conservative political views. AFT members have higher educational qualifications, more years of teaching experience, and more years of union membership. They also tend to be more involved in teaching and to have higher intrinsic motivation.

Obviously the generalizations presented here reflect a great deal of speculation. As one investigator has suggested, perhaps the only safe predictor of how likely it is that a particular teacher will become an active union advocate is that teacher's attitude toward unionism.

Under the rubric of "Teacher Attitudes" there are few studies which deal with the administrator's role in unionization or militancy. It has been noted that there is a significant difference between the principal's perception of teacher attitudes toward militancy and the attitudes expressed by the teachers. Evidently, supervisory personnel attitudes do not appreciably affect the teachers' attitudes. Too, it has been reported that administrators do not play a very active role in obtaining collective bargaining demands for their teachers. This is probably in deference to the inhibitory influence of the local school boards, which traditionally oppose any type of militant action.

In concluding this section, it is important to point out that school administrators need not assume that militancy is necessarily inimical to their own interests. If they look more closely at the motivations, they will find that in the majority of cases, union demands, even those which seek higher salaries for teachers, will eventually result in increased prestige and effectiveness for the entire educational profession.

(Almy & Hahn, 1971; Alutto & Belasco, 1972 Arth, 1971; Belasco, 1970; Booth, 1971; Cass, 1974; Cilek, 1971; Clifford, 1971; Crompton, 1971; Davis, 1972; Fisher, 1969; Fox, 1971; Gans, 1971; Giandomenico, 1973; Greabell & Olson, 1973; Hess & Kirst, 1971; Jessup, 1971; Keely, 1973; Lingenfelter, 1971; Miskel, 1973; Nagi, 1973; Nagi & Pugh, 1973; Nealon, 1970; Osinoff, 1971; Peterson, 1972; Plain, 1971; Porter, 1972; Purrington & Jones, 1970; Sinoivetz, 1973; Simith & Fox, 1971; Tamaribuchi, 1971; Tessier, 1972; Wise, 1973; and Yuskiewicz & Donaldson, 1972.)

CHAPTER VII - RELATIONSHIPS WITH STAFF, PARENTS, AND COMMUNITY

There is no gainsaying that the teacher is the immediate vehicle through which any institutionalized educational program is delivered. It has also been emphasized in the preceding sections that there are variables outside the teacher's own skill and personality which have a critical impact on the climate or ambience of the teaching-learning environment. Among these variables, perhaps most influential are the relationships with other adults involved in the schooling process.

Principal. Next to the teacher, the principal is the person most closely and intimately involved in educational decisions. A number of investigators have indicated that the principal may even be the most influential person. This is particularly true in the installing of educational innovations, where the attitude of the principal can determine whether the teacher implements the program whole-heartedly, or merely gives lip-service to the new concepts. Thus, the nature of the principal-teacher interaction has frequently been the subject of research.

In addition to studies using the OPDQ, and other school questionnaires addressed to both teachers and principals, a number of investigations have developed scales to describe specifically the principal's leadership behaviors. One study, involving 23 principals and 412 staff, identified four dimensions: tolerance of freedom, consideration, integration, and tolerance of uncertainty. Principals administering schools where teachers are encouraged to participate in organizational decisions scored significantly higher on the positive poles of these dimensions than did principals utilizing authoritarian control processes.

Supervisory style has been categorized as: 1) Nomothetic – Emphasis on institutional expectations; 2) Idiographic – Emphasis on indi-

vidual expectations; 3) Transactional – Shifting in emphasis according to the specific situation.

Teachers show strong negative feelings toward principals adopting the nomothetic style, and strong positive feelings toward idiographic style principals. It is interesting, though, that principals and supervisors who are nomothetic in their control behavior express satisfaction with their roles, whereas idiographic supervisors are dissatisfied.

In a study of management relationship effects among 500 teachers, 40 principals, and 20 school superintendents, the data indicated that homogeneous management behavior and rule administration affect teacher perceptions of the principal's leadership ability. Principals who allow teachers a high level of participation in administrative functions are perceived as having high leadership quality. Their staff demonstrate less tendency to active militancy. Principals with punitive and controlling administrative practices are perceived as having low leadership quality, and are more apt to have a high rate of teacher militancy.

The most important criterion for a productive supervisory relationship, whether it be with the principal, department head, central office staff, or teaching colleague, is the teacher's perception of the level of expertise of the resource person. Of these four potential resources, the principal is seen as the person possessing the lowest degree of expertise. Because of this generally negative halo effect, teachers often see principals as more custodial than they actually are, and are consequently loathe to turn to this person for help with instructional problems. Between the low professional prestige attributed to most principals and the generally authoritarian mode of administrative style adopted by them, the essential channels of communication are frequently difficult to unblock.

The consensus of research findings seems to demonstrate unequivocally that principals' leadership styles and level of expertise affect teacher morale and, directly or indirectly, the entire teaching-learning process. There is also sound evidence that principals who share their administrative powers and responsibilities create a far more effective teaching environment. Improved principal-teacher communication results in greater teacher initiative, originality, and productivity. An open and democratic policy improves teacher's attitudes, not only to the principal as an administrator, but also makes them more willing to seek and accept leadership responsibility themselves.

(Ambrosie & Heller, 1972; Caldwell & Easton, 1974; Caldwell & Spaulding, 1973; Feitler, 1972; Hornstein, Callahan, Fisch, & Benedict, 1970; Gorton, 1971; Kleparchuk, 1970; Lee, 1971; Lewis, 1972; Peruzzi, 1972; Smith, 1973; Swick & Ross, 1973; and Urich & Van Turbegan, 1972.)

Resource Specialists. Among the non-teaching professional staff who may have an important bearing on the teacher's effectiveness are guidance counselors, psychologists, and consultants. Usually, the scope of counseling activity in the elementary school is rather limited. Other than the psychometric functions, the major guidance tasks of assignment to levels or courses are carried out by the principal or vice-principal in consultation with the classroom teacher. It is at the intermediate or junior school level that guidance takes on more of the nature of a professional specialization.

There is a limited amount of research on the teacher's attitude to this professional activity. The articles reviewed for this volume support a cooperative, decision-making procedure at all levels. For example, in an experiment in which teacher-counselor teams were set up, the cooperative procedure received support and favorable comments from teachers, students, counselors, and parents.

At the secondary school level, principals, counselors, and faculty have similar preceptions of the occupational guidance role of the counselor. Parents and students often feel that counseling services are offered too infrequently. Too, those which are available are inadequate for making important academic and vocational decisions.

Teacher attitudes toward school psychologists are frequently based on ignorance. Most teachers have had little opportunity to find out exactly what it is that the psychologist does, or how effective psychological intervention may be. It is quite ironic that the teachers who express the most favorable attitudes toward this specialized function are ones who have had the least direct contact with the psychologist. Those who have had occasion to use the services of the psychologist are much more apt to have a negative and critical attitude. Yet teachers express the belief that it would be good to have a full-time school psychologist. They would, however, like to see less time between referral and psychological diagnosis, and more effective treatment instituted after diagnosis has been completed.

There are a variety of resource specialists who have been traditional adjuncts to the school personnel roster. These include subject area specialists in music, art, drama, physical education, and sports coaches, as well as remedial experts in critical subject areas such as reading and math. During recent years, with the introduction of new curricula in math, science, biology, etc., and with the installation of major "Planned Variations" instructional models, the consultant has appeared as a new type of resource person.

In general, teachers have favorable attitudes toward curriculum consultants, especially those who are professors at local teacher training institutions. Personality characteristics, level of expertise, and familiarity with the peculiarities of the local school system are always important determinants of the type of impact the consultant will have. But

these variables are even more critical when the consultant is brought in from outside the school district or community, to serve as the change agent for a federally-instituted program which has only tentative and lukewarm support.

(Dawson, 1969; Gilmore & Chaudy, 1973; Harty, 1970, 1973; and Johnson & Johnson, 1972.)

Paraprofessionals. The non-credentialled assistant in the self-contained classroom is a relatively recent phenomenon. These paraprofessional, or non-professional, persons were introduced into the school structure as part of the wave of educational innovation which was an integral component in the war on poverty. It had two precipitating purposes. The first was in part a response to the teacher shortage. It was also intended to provide additional help in the classroom. Teachers would then, it was thought, be able to redistribute their time so as to be able to individualize instruction. Disadvantaged children could then be brought up to grade level in academic performance. A second important objective was to provide a career opportunity for indigenous residents, many of them parents of the children in the program.

Assignments to positions were made on the basis of personal interviews, often influenced by considerations completely unrelated to the appropriateness of the applicant. Consequently, there was a tremendous range in the educational level and qualifications of the paraprofessional aides employed in the classrooms. The initial inadequacies were little, or not at all, ameliorated by "quickie" workshops of four to eight weeks. These were usually given during the summer prior to the school year.

Because of the lack of preparation, the role functions of the aide in the classroom were ill-defined. In many cases, teachers resented having another adult in "their" classroom, altogether. Since they had to have them, aides were frequently used to perform the menial housekeeping

tasks. Where the aides were quiescent and accepting of this custodial role, there might be an increase in teacher's job satisfaction, but little effect on the achievement of the students.

Both the attitudes of teachers and the duties of aides vary greatly across the country, depending on a variety of local school and community conditions. There is, however, a strong correlation between the level of implementation of an innovative program, and the extent to which the aide is given educational tasks and responsibilities.

Where the teacher and teacher aide are functioning as a team, there is a higher degree of professional satisfaction for both. Teachers who see aides as colleagues rather than subordinates employ them more effectively. Teachers with more than 20 years of teaching experience are able to incorporate aides into their classrooms far more productively than can teachers with less than 10 years of experience. It is particularly threatening to a new teacher to have to share the classroom with aides who have had many years of experience in the classroom under a previous teacher.

The most prevalent complaint teachers have against paraprofessionals is their lack of time sense. Over and over, teachers become upset because of tardiness, or absenteeism, without proper notification. Also, paraprofessionals from cultures with different sets of values, and different child-rearing practices, are often extremely rigid and dogmatic. They would like to see far more structure and academic emphasis in the early grades than do most preschool-primary teachers. Appropriate training programs have demonstrated that changes in even these deep-rooted behavior patterns are possible.

Another educational need has been filled by paraprofessionals. Where there are a high proportion of non-English-speaking students, and a scarcity, or even complete absence of teachers with facility in the second language, the bilingual aide has actually made it possible to implement the

Title VII Bilingual-Bicultural program. In a truly bilingual approach, teachers are more apt to perceive the paraprofessional aide as serving an extremely important instructional function.

The functions of the paraprofessional in the secondary school are far more carefully circumscribed; hence, they offer no threat to faculty autonomy. They provide assistance in the library, serve as clerks in the administrative office, work in the resource center, take care of audio-visual equipment, and supervise students in extracurricular activities. But they may also serve as instructional aides under certain conditions. The teachers usually favor aides to provide these services.

(Axford, 1968; Barba, 1973; Canady & Seyforth, 1972; Coleman, 1971; Giaquinta, 1972; Hennike & Taylor, 1973; Jackson, 1972; Jacobson & Drije, 1972, 1973; Johnson & Faunce, 1973; Kravas, 1973; Krear, 1972; Kulaga, 1971; Liston, 1971; O'Tuel, 1971; Pool & Kataris, 1971; Robinson, 1971; Sciara & Jantz, 1972; Stern, 1970; Stewart, 1971; Thompson, 1970; and Thorlacius, 1969.)

Parents and Community. There is undoubtedly a great deal more literature on teacher attitudes toward parents and community involvement in the school and classroom than was accessed in the current search. During the second half of the 1960's, a great many programs were instituted, especially in poverty areas, to bridge the gap between the home and the school. The published reports are primarily concerned with program description and the evaluations are usually subjective and favorable. Little attention is paid to the attitudes of teachers to such programs. But where there is some indication of teacher reaction, the range is from uncooperative and negative, to mildly receptive.

(Barsch, 1971; Brown, 1974; Champagne & Goldman, 1971; Community Awareness Program, 1972; Karnes & Zehrbach, 1972; Nesset & Faunce, 1972; Stern, 1970; and Tapping Human Resources, 1970.)

CHAPTER VIII - WORK MILIEU

Organizational Climate. Closely related to the topics of job satisfaction and militancy are certain features of the actual work environment. As many researchers have pointed out, teacher behavior and attitudes are enormously potent factors, affecting climate and status relationships in the school society. These in turn affect the students' behavior, moral values, and intellectual growth. Leadership style and use of power are important aspects of organizational climate. If the teacher shares control with the students, the students tend to interact with each other much more freely. There is a reduction in interpersonal conflicts and anxiety; independent thought, acceptance of moral responsibility, and development of autonomous work habits are more likely to occur.

Many sociologists and psychologists have devoted a great deal of research effort in analyzing teacher leadership styles which can be expected to bring about such desirable results. They have identified specific teacher characteristics. For example, teachers in lower class area schools tend to be younger, less experienced, and more apt to come from blue-collar working class backgrounds than teachers in middle class schools. Unfortunately, these investigations fail to assign an appropriate weight to the influences, outside the teacher but within the social structure of the school, which affect the teacher's attitudes and behavior. Outside consultants brought in to serve as change agents often overlook the importance of

obtaining adequate descriptive data on the target systems they are supposed to influence. An unreceptive organizational climate may nullify the best of planned intervention efforts.

Pressures are brought to bear on the teacher from two major sources: 1) the community context of the school, and 2) the internal aspects of the organizational climate. The first of these will be discussed later in this chapter; the second is the topic of this section.

Some of the earliest investigations, which attempted to relate dimensions of organizational climate to school and staff characteristics, reported conflicting results. Since the development of the Halpin & Croft Organizational Climate Description Questionnaire (OCDQ) in 1963, a more reliable picture of these relationships is beginning to emerge. The OCDQ is a 64 item questionnaire, with eight subtests. It was normed on 1151 teachers in six geographic regions of the United States. Statistical analyses of the data revealed eight independent dimensions, four of which relate to teacher behavior and four to principal behavior. The four teacher dimensions are: 1) Disengagement or anomie – Teachers go through the motions but are not really involved; 2) Hindrance – Teachers feel that the principal overburdens them with routine duties, committee demands, and unnecessary busywork; 3) Esprit or morale – Teachers feel that their social needs are being met and they experience a sense of fulfillment in their teaching activities; 4) Intimacy – Teachers enjoy friendly relations with each other and the satisfaction of their social needs is not necessarily associated with task accomplishment. Subscales 5 to 8 describe principal dimensions: 5) Aloofness – The principal is informal, impersonal, aloof, and guided by rules. There is a distinct lack of socialization with staff members; 6) Production emphasis – The principal is highly directive and communication

flows in one direction only, with little sensitivity to feedback from subordinates; 7) Thrust – The principal motivates the staff by his own example, never asking for more than he himself is willing to give. Teachers are more tolerant of loads placed on them by this type of leadership; 8) Consideration – The principal treats his teachers as human beings, always trying to do something a little extra in human rather than professional terms.

In both the teacher and principal subscales, the direction of climate moves from open to closed. Combining the ratings, the total score characterizes the school climate as: 1) open; 2) autonomous; 3) controlled; 4) familiar; 5) paternal; and 6) closed.

The OCDQ has been used in several assessment studies. Johnson and Marcum (1969) found that the instrument was able to discriminate between innovative and non-innovative schools. Highly innovative schools had open climates, spent more money per child, and had younger staff with fewer years of experience. These schools were also apt to be large, urban establishments. Gustafson et al. (1971) used the OCDQ to assess staff perception of climate in a bilingual program. The questionnaire was administered to 80 bilingual teachers and administrators in four schools where above 50% of the students were Mexican-American. Staff characteristics of age, ethnicity, or prior teaching experience were not significantly related to climate. All four bilingual schools fell at the open end of the school climate continuum. Teachers were markedly low in hindrance and intimacy, and principals were low in production and consideration.

The validity of the OCDQ seems to be supported by corroborative findings of a number of independent investigators. For example, teachers in open climate schools, where there is an opportunity to participate in decision-making, find faculty meetings much more worthwhile than teachers

who do not participate. Open climate teachers high in "esprit" are more receptive to innovative curricular practices. And teachers and principals in open climate schools hold more positive attitudes toward students, but the students' attitudes toward the school do not differ as a function of school climate.

With reference to issues involving minority populations, a study of attitudes of teachers in schools affected by court-ordered desegregation revealed that black teachers perceived the climate in the desegregated school as more open than did white teachers, either before or after desegregation. Non-transferred teachers, remaining in schools into which minority teachers had been transferred, perceived the school climate as becoming more closed after desegregation. There is a consistent tendency for schools with high proportions of minority and disadvantaged students to be less open than schools in middle class environments. In such schools, however, the values of teachers and their perceptions of the principals are more positive if there is an open climate. Comparisons between schools having the most open and the most closed climates showed significant differences among teachers' values concerning disadvantaged students, but no differences between principals' and teachers' values.

A number of investigations have compared the OCDQ with other measures. Researchers using the Pupil Control Ideology approach find that public elementary schools with open climates are significantly more humanistic than schools with closed climates. Teachers, but not principals, in open schools receive higher humanism scores on the PCI than teachers in closed schools.

The OCDQ has been compared with the Profile of a School questionnaire which uses the Likert & Likert scaling system. There was a positive

correlation between these instruments, supporting the assumption that the two theoretical models are not incongruent. Several investigators have used the OCDQ as a measure of organizational climate together with the Sinclair & Sadker Elementary School Environment Survey (ESES), which elicits students' perceptions of teachers' instructional styles. The ESES produces six variables: humanism, autonomy, morale, opportunism, and resources. Several large scale studies, involving thousands of 5th and 6th grade students in northeastern States, have found a significant relationship between student-teacher conceptual system similarity and positive student perceptions of the classroom climate.

(Ackerson, 1970; Appleberry, 1971; Brandon, 1971; Brumbaugh & Christ, 1972; Carbonari, 1973; Carlson, 1965; Carnie, 1966; Coleman, 1969; Cowan, 1971; Friesen, 1972; Gies & Leonard, 1972; Glidewell, Kantor, Smith, and Stringer, 1966; Gustafson, Owens, & Schwimmer, 1971; Hall, 1972; Halpin & Croft, 1963; Larkin, 1973; Leonard & Gies, 1971; McKay, 1973; Phillips & Sinclair, 1973; Richland, 1965; Rizzo, 1967; and Sinclair, 1972.)

Organizational Structure. While considerations of structure are often included under Organizational Climate, a number of researchers have addressed themselves specifically to this topic. From one point of view, the organizational structure variable is seen as a measure of deviance from the self-contained classroom. Three types of classrooms have been examined. The first is the traditional, self-contained structure in which the teacher spends at least five of the six hours of the school day with the same group of children. A second type of structure is one in which there are regular assignments of children to part-time self-contained, and part-time large or small group instruction. The third category includes schools which have a non-graded, team teaching structure. In all of these conditions, the class size is assumed to be the basic number of children in the

home room organization.

In a study using these three levels of organizational structure, it was found that the greater the deviation from the traditional classroom structure, the more likely it was that students would perceive their teacher as having lower task and expressive orientations. Although the teacher's power orientation is not much affected by organizational structure, the greater the deviation from the self-contained classroom, the more teachers were seen as playing a less active leadership role. The inference is drawn that teachers are not concerned with asserting themselves as leaders in situations where they are not personally accountable. (A more valid interpretation might be that the leadership role in an open or innovative school organization, is far more subtle, and expressed in ways which are not perceived as controlling by the students.)

Traditionally, it has been believed that the smaller the class size, the easier it is for teachers to be task-oriented, more encouraging of student initiative, and to engage in more verbal interactions with students. But the data do not support these notions. Class size seems to have little effect upon the teacher-leadership dimension. However, administrative arrangements, such as non-grading and team teaching, have very important effects on leadership styles. There is a strong, monotonic relationship between organizational structure and teacher leadership styles, so that leadership behavior can be changed quite radically by altering the context in which the teacher operates.

It is also true that leadership style is relatively independent of contextual factors that do not directly affect the internal organization of the classroom. In effect, once the teacher closes the door, an autonomous relationship with students is established. Bureaucratization of the school, organizational climate, and class size have demonstrated

little effect upon leadership styles within the self-contained classroom.

Another approach to the study of organizational structure uses a Maslow-type instrument to characterize school systems into "tall," "medium," and "flat" categories, depending on the verticality of control. Thus, a "tall" structure would be one in which control is highly vertical, with many steps in the chain of command. A "flat" organization is one in which control is democratized across a broad, horizontal plane. The instrument consists of two Likert-type, eight-item scales, with analyses in terms of perceived needs satisfaction. Compared to those in "tall" and "medium" categories, teachers in "flat" organizations find higher levels of needs satisfaction in the areas of community prestige, professional authority, and participation in establishing educational goals. The more the administrative layers between the teacher and the top authority level in the organizational hierarchy, the more the teacher role is seen as restricted, regimented, and formalized.

A third type of investigation looks at organizational structure in terms of a School Organization Inventory (SOI) and a Conflict Assessment Questionnaire (CAQ). The SOI provides measures of three dimensions of bureaucracy: hierarchy of authority, rules and regulations, and impersonalization. Items in the CAQ are concerned with administrative, student, and staff relations, in terms of decision-sharing, personal non-material opportunities, work conditions, material inducements, and school priorities. Findings support the hypothesis that factors in the school organization structure, outside the teacher's own personality, determine the level of bureaucracy.

Community and teacher expectations have been related to the authority structure of school systems, and a significant difference in

distribution of authority has been found. Educational and economic issues have had the most conflict potential. Both teacher and community groups want change, but communities are demanding greater economic control over school budgets. The potential for conflict may be ameliorated by changing perceptions of decision-making roles. Fortunately, there are encouraging signs that the community expectations are moving in the same direction as those of the professional staff.

Effects of bureaucracy vary with minority group membership. For example, it has been found that teachers at black schools are less likely to express resistance to parental participation and educational innovation. They evince less hostility to parents, are less inclined to employ routine instructional practices, and are more humanist in pupil control behaviors. In these schools, more of the black teachers are apt to show custodial attitudes toward black students. Also, custodial attitudes and hostility toward parents are most common in schools with loose structural organization. Where there are rules for teacher behavior toward parents, teachers tend to be more open and less hostile, and parents are more likely to participate in the new educational programs.

(Belasco, 1972; Belasco & Alutto, 1971; Carpenter, 1973; Cuban, 1971; Gerhardt & Miskel, 1972; Goodwin, 1973; Grassie, 1973; and McQuay, 1971.)

Physical Characteristics of School Setting. Industrial psychologists and human engineering specialists stress the psychological import of the physical features of the work place. It is therefore very surprising to find an almost complete absence of articles dealing with the teachers' attitudes toward the conditions in which they must spend the majority of their waking hours. When one visits schools across the country, from Beverly Hills to Compton in California, and Bedford-Stuyvesant to Westchester in

New York, one cannot fail to be struck by the tremendous range in the quality of the physical amenities enjoyed by teachers. While it is true that great teachers can function brilliantly under the most adverse conditions, and with the most meager of instructional equipment, it seems almost self-evident that the functioning of the average teacher will be seriously impaired or facilitated, depending on the attributes of the physical environment.

Yet there are no hard data on these effects. The monumental Coleman study did include a consideration of physical variables, but these were looked at in terms of student performance. The effects on teacher attitudes toward their students, and teaching as a profession, were not explored.

There are a few studies which are concerned with aspects of the physical environment as they relate to the instruction of handicapped children, an area not covered in this review.

CHAPTER IX - EVALUATION

There are two major aspects of evaluation with which most teachers are concerned. First, and more traditionally, teachers are accustomed to evaluating various types of student achievement and growth. But a second aspect of evaluation which has but recently come to the fore deals with the evaluation of the competencies and effectiveness of the teachers themselves.

Student Evaluation. The traditional teacher-made assessments are being increasingly threatened by extensive use of standardized achievement and nationally-normed commercial test materials. Also, new approaches, such as criterion-referenced testing, based on behaviorally defined objectives, require skills for which the average teacher has had little training. Many teachers have not been taught the things they need to know about testing to become more effective teachers.

While most teachers would agree with the necessity for assessing student progress, they believe that there is too much emphasis on testing for purposes other than to attain a diagnostic understanding of individual instructional needs. A major complaint is that a great deal of testing is done to satisfy various legislative and funding requirements, and that the teachers are given no feedback as to the test results.

Even when results are made available for diagnostic purposes, the teachers do not avail themselves of the test results. And they have no idea how these test scores are used by administrators or counselors. Another cause for resentment toward standardized test programs is that they often emphasize specific subject matter knowledge, while the teacher's classroom activities are addressed to the affective areas of emotional,

social, and motivational development. Even in the cognitive domain, they often favor problem-solving, understanding relationships, and broader intellectual skills, rather than the acquisition of discrete bits of information.

To upgrade the competencies of classroom teachers in program evaluation at the local school level, an evaluation liaison teacher was assigned to each school in a large urban district. The model evolved from the following assumptions: 1) The classroom teacher is the key facilitator of instruction and its evaluation; 2) It is the principal's function to institute in-line administrative channels to support evaluative processes throughout the school; and 3) The responsibility for instructional evaluation rightly belongs in the classroom.

At the end of the program, 67% of the elementary teachers and 72% of the secondary teachers felt that they had profited from the presence of the liaison evaluation teacher, and wanted to have the system continued.

A rather recent development, moving toward the increasing specificity of measurement, has been the introduction of the concept of criterion-referenced testing. These tests are usually keyed to a hierarchical set of performance objectives. While it is possible for teachers to develop such tests on their own, the use of computer technology increases the effectiveness of the assessment procedure. Teachers are initially put off by the use of the unfamiliar concepts and hardware. They are also afraid that the performance of their students on the criterion-referenced tests will be used as a basis for assessing the effectiveness of their instruction. After these fears are allayed, and after several years of familiarity with the technology, teachers have developed extremely favorable attitudes toward criterion-referenced testing. They are particularly pleased to get

the individual printouts which give them an immediate picture of the instructional needs of each child, as well as the group printouts, which show where the class stands in terms of the teacher's instructional objectives.

Simultaneous with the trend toward increase in specificity of testing, exemplified by the behavioral objectives/criterion-referenced approach, there has been an increase in pressure to abolish testing and grading practices completely. Teachers' personality traits of concreteness or abstractness have been related to attitudes toward grading. Pupil control ideologies which favor openness and flexibility are not surprisingly incongruent with rigid grading systems. Many educators believe that the traditional letter-grade system has more weaknesses than strengths. The system seems to meet the needs of the parents more than it does those of the students or teachers. In one study, administrators and teachers indicated that they would prefer to report to parents and students in terms of goals attained rather than in terms of letter grades. But psychometricians present a valid rationale for grading. They also make the point that evaluations need not be an "either-or" decision, but can incorporate both concepts.

(Chase, 1973; Dieter, 1972; Ebel, 1974; Elsner, 1973; Farr & Griffin, 1973; Fleming, 1972; Forsyth, Feldt, & Brandenberg, 1973; Frank & Brown, 1973; Funk, 1972; Knipe & Krahmer, 1973; Krause, 1969; Mathews, 1973; Rookey & Reardon, 1973; and Thompson, 1971.)

Teacher Evaluation. While teachers are thoroughly accustomed to evaluating students, they are not happy about being evaluated themselves. Of course, in the past there have always been informal evaluations of teachers. Principals and supervisors have been known to peek through windows or listen over building-wide broadcast systems, demand that teachers

keep their doors open during instructional periods, and "pop in" unexpectedly when the one moment of pandemonium was in progress.

These types of evaluations have been irritating and frequently degrading. But those teachers who went by the rules, who kept the window shades even, who kept the children quietly in their seats, had nothing to fear. Administrators gave high ratings to teachers who abided by school regulations, weren't absent nor tardy too frequently, and dressed appropriately. If the students did not learn, or hated school, it was because of inherent inadequacy in the learners, not the teachers.

All this has been altered by the introduction of the concept of "Accountability." As the federal government became more and more directly involved in public education, it became apparent to a number of legislators and other public officials that, unlike any other form of endeavor (except, perhaps, medicine) there was no link between the producer (teacher) and the product (an educated student). Thus, a type of "quality control" was built into every allocation of funds for the large scale interventions aimed at the improvement of education. To justify further expenditures, it became necessary to prove that the monies already invested were having the desired effect.

Economists entered the educational picture. In the Head Start program, there was an almost explicit attempt to determine the dollar cost of each point of increment in I.Q. score. Presumably, there was some simple-minded way of dividing the average increase in I.Q. (tested on a pre-post yearly basis) by the average per-child cost of the Head Start program. The naivete of this approach has now been disspelled, but the concept of accountability, that is, the relationship between money spent, the characteristics of specific programs, teacher behavior, and student outcomes, has permeated

most State and local departments of education. It is a fact of life which teachers will have to live with for a long time to come.

In the beginning, the idea of being held responsible for student learning was anathema to teachers and teachers' organizations. There were many who felt that it was based on an industrial model (which it probably was), and that it was not applicable. Education and schools are social institutions, dealing with human relationships, not products.

To counteract these negative attitudes, workshops and institutes were set up. The traditional teacher training program had not prepared teachers for being evaluated in terms of student behavior. As teachers become aware that program evaluation could be a tool to improve their own effectiveness, rather than a threat to their hard-earned security, they become more receptive. However, workshops which merely explained an evaluation program had little effect on changing teacher attitudes. Only when the principals are also involved, when the teachers have an opportunity to share in setting criteria, actively participate in the evaluations, and are given formative feedback to assist them in improving their ability to reach their students more effectively, only then does a positive change in atttitude toward evaluations occur.

The use of teacher evaluations in setting standards for professional competence cannot be completely ignored. There is some research evidence that the teachers who feel most negative toward accountability are those who also feel most uncertain about the adequacy of their performance as teachers. But teacher evaluations have also been used as incentives, for example, in obtaining salary increments for inner-city teachers.

In discussing incentives, it is impossible to avoid two extremely sensitive topics: merit ratings and tenure. Even the most effective teachers, who may gripe about the fact that certain colleagues are sluffing

off responsibility and behaving inappropriately with students, oppose the use of merit ratings as a basis for salary increments. While they would agree that, as in any other occupation or profession, superior performance should be rewarded, the points of concern are: on what basis will the criteria for superiority be set, and by whom? In 1953, the Committee on the Criteria of Teacher Effectiveness, set up by the American Educational Research Association, reported:

> ...after 40 years of research on teacher effectiveness... one can point to few outcomes that a superintendent of schools can safely employ in hiring a teacher or granting him tenure. (American Educational Research Association, p. 657).

The same statement could be made today without any alterations, except for changing the 40 to 60.

(Evaluating compensatory education accountability, 1971; Herndon, 1974; Heyman, 1972; Horton & Bryan, 1971; House, 1972; Jaffy, 1970; Johnson, 1971; Jacobson & Stiles, 1973; Kie Kiamie, 1973; Lawton, 1973; Mahnken, 1971; McGivney & Krahl, 1973; Neely, 1972; Neff, 1974; Ray, 1974; Remmers, 1963; Rosen, 1973; Sewell, 1972; Stern, 1969; Talmage & Ornstein, 1973; Thompson, 1971; Toriello, 1972; and, Wolfe, 1973.)

Closely related to philosophy underlying accountability, but taking quite a different tack, are recent developments such as performance contracting and voucher systems. In both of these innovations in the delivery of schooling, the basic concept is that the criterion of teaching is the performance of children. The introduction of the voucher system goes one step further, in that it gives parents the right to determine whether the schools their children are attending are doing the best possible job.

In performance contracting, a corporation, usually under private auspices, contracts to produce specified gains in student scores on standard achievement tests, especially in reading and math. The earliest contracts reported dramatic gains, but subsequent information revealed that there was a serious problem of "teaching to the test." As a matter of fact, the whole question of evaluation, what behaviors should be measured, and the comparative weights different types of changes should be given, still remains a major source of difficulty. But the primary criticism is that teachers continue to object to the mechanistic approach of awarding educational business to the highest bidder.

Many systems and administrators, who are oriented to increasing the performance of students on standard tests in academic subjects, favor the performance contracting concept. But they join with teachers in their opposition to the voucher system, which poses a real threat to the entire school establishment. The arguments on voucher systems are irrelevant to the concerns of this review. It is important to note, however, that the negative feelings of educators generally will not be easily modified.

(Cooney & Hatfield, 1971; Dembo & Wilson, 1972; Education Vouchers, 1973; Feldmesser, 1971; Incentives in education, 1972; Megel & Bhaerman, 1971; Rapp, 1971; and, Vruggink, 1971.)

CHAPTER X - TRAINING PROGRAMS TO EFFECT ATTITUDE CHANGE

The variables which determine or facilitate attitudinal change have been studied by many investigators. It is the purpose of this chapter to review some of the findings concerned with how effective various pre-service and in-service teacher training programs are in strengthening appropriate attitudes and modifying those which are non-productive. In the first chapter it was noted that there are three components, the affective, the cognitive, and the behavioral, which must be considered in designing interventions to effect changes in attitudes. An educational program may concentrate on one of these areas, or it may combine different degrees of emphasis on emotion, belief, or behavior. To have any hope of success, the educator who wishes to effect attitudinal change must be aware of the importance of all three components.

1) Affective component. A very primitive but powerful basis for attitude formation is the experiencing of a strong emotion in the presence of the attitude object. This emotional experience may be initiated by a wide variety of events. For example, contact with influential persons, personal success or failure, and events which precipitate personal conflicts or resolutions, may supply the appropriately effective stimuli. If the initiator of a new program has the confidence and respect of the staff; if the teachers find personal satisfaction in the social relationships deriving from the esprit of a charismatic leader; if they experience success in their professional efforts, then these favorable emotions will very likely produce a positive attitude toward the innovation.

Where these factors are not present, for example, if the p-ogram is installed by an unfamiliar person brought in specifically for the new

approach, and if the approach itself is extremely antipathetic to existing educational attitudes, a more gradual introduction is necessary. The important thing to remember is that emotionally-charged attitudes can be desensitized, but not without the cooperation of the people involved.

2) Cognitive component. Certain thoroughly entrenched attitudes may set up logic-tight compartments which become impervious to rational argument. However, unless the cognitive or belief base of the attitude can be penetrated, it is impossible to change the attitude. True, there may be some superficial changes in behavior, but these will be produced mechanically and grudgingly unless the underlying affect and belief structures can be modified. Although this is difficult, it can be done if a condition of dissonance or incongruence is set up. An optimistic setting for the acquisition of a new belief, or the modification of an existing one, is, as Loree puts it:

> ...when the source of information is respected, when the initial attitude is not firmly entrenched, when the communication reflects attitudes that are consistent to the needs of the receiver, and when the communication is acceptable to the important reference groups of the receiver (Loree, 1971, p. 110).

3) Behavioral component. Attitude change may result when an individual learns to behave in a new way with respect to the attitude object. The new behavior may result from certain consequences, such as rewards or punishments, which are established specifically to ensure the new patterns of behavior. But the behavior itself, as it produces favorable consequences that are incongruous with the established beliefs, provides new information about the world, which then works to modify the beliefs.

This approach is extremely relevant to working with teachers who believe that black children are inherently inferior in acquiring academic competencies. If they are, willy-nilly, placed in an intervention program

which produces dramatic achievement gains in these students, an experience which is incongruous with their expectations, both the cognitive and the behavioral components will be modified. And the increase in self-esteem as a result of this professional accomplishment could modify the emotional component as well.

It would be impossible to include in one chapter all the research on the many directions teacher training has pursued. The focus is on attitude change, but even here the literature is so prolific and diffuse that nothing approaching an exhaustive review has been possible. To provide some structure, the chapter is organized according to the three basic aspects of attitudes. While every program obviously involves all three components simultaneously, an attempt has been made to group together, in each of the first three sections, those studies in which the same aspect appears to be salient. In the fourth section, those investigations have been reported where the investigators have been concerned with two or all three of the components, more or less equally.

(Devore, 1971; Fuller, 1974; Kolesnik, 1970; Loree, 1971; Marino, 1971; McGuire, 1966, 1969; Peck & Tucker, 1973; Sears & Abeles, 1969; Smith, 1971; and Zajonc, 1968.)

Affective Component:

In one sense, every teacher training program expects to change the trainees' feelings toward teaching, children, and the various other aspects of the teaching-learning situation. But there are certain investigators who zero -in more precisely on the affective component. This has become even more critical in the past decade, during which greater attention has been given to minority children and innovative teaching procedures.

Student teachers, and experienced teachers, too, are individuals. They all come to teaching with unique sets of emotions and beliefs which have governed their lives for 20 or more years. They also have a wide range of personality structures, some of which are more or less influential where attitude formation is concerned. A general discussion of personality variables was included in Chapter VI. Here the concern is with finding out how personality traits affect and are affected by different types of training programs.

As the earlier section pointed out, it is very difficult to establish a meaningful relationship between personality characteristics of trainees who do and those who do not elect to go into teaching. Or those who will make successful or unsuccessful teachers. There is some indication, however, that when programs are specifically designed to change certain traits, for example, to modify extreme levels of dogmatism, rigidity, and closed-mindedness, positive growth can be effected. This was supported when a group with science teaching experience scored measurably less close-minded than one which had a traditional methods course. There was no significant change in the trainees who had demonstrated open-mindedness on the Rokeach Dogmatism Scale prior to the training period. Other investigators have shown that a course in human development can decrease authoritarian attitudes toward children but, again, the amount of change was related to the initial level of authoritarianism. The main point is that these desired changes must be explicit goals of the training, and not expected to occur as incidental to other types of outcomes.

Personality and value structures can also affect the pre-service teacher's choice of training experience. Variation in degrees of authoritarianism, traditionalism, and subject content emphasis, as well as knowledge and beliefs about the nature of education, have been found to be

predictive of whether the trainee will prefer formal courses or an opportunity to work as an interne in a field experience. It is quite safe to predict that the candidate who possesses an idealistic philosophical orientation will adopt a more progressive educational approach. Also, the data indicate that students with more progressive attitudes tend to exhibit a wider range of involvement, spend more time in preparation, and perform better on knowledge-type tests than those who have opted for the more traditional course-work approach.

(Cook, 1971; Fuller & Parsons, 1972; Kelsey, 1971; Klein, 1970; Larimore, 1973; Linden & Linden, 1969; Nelson & Ahmed, 1972; Pizzini, 1972; Ralph, 1971; Scarr, 1970; and, Shapiro & Shiflett, 1972.)

A related line of investigation is concerned with procedures designed to influence value structures. There has been a great deal written about this issue. Many "radical" sociologists feel that one of the major sources of dissonance in education is that most teachers, regardless of their social class backgrounds, have internalized the value systems of the middle class culture. These values are held to be incongruous with those of the student from a minority or poverty environment. From this point of view, an essential part of teacher training should be devoted to exposure and exploration of different value systems.

The procedure which has demonstrated the greatest potential in this area is called "Values Clarification." The first step in the technique is that of self-clarification, in which the participant becomes aware of buried or disguised beliefs and motivations. Then there is the dynamic group interaction, in which the dissonant value systems come into confrontation. In this way, in small discussion groups, teachers and trainees are encouraged to express thoughts and feelings that prevent them from relating to students and colleagues who represent different cultures.

Several investigators who have carried out demonstrations with the values clarification technique report that the method has helped dispel stereotypes of distrust and fear, and that respect, liking, and greater understanding have been facilitated.

(Gordon, 1966; Harvey & King, 1969; Hoover & Schutz, 1968; Lau, 1972; Marino, 1971; Ruben, 1971; Rubin, 1972; Shapiro & Shiflett, 1972; Weil & Weil, 1972; and, Wolkon & Clarke, 1974.)

Cognitive Component:

Under this rubric are classified all the teacher training programs which are concerned with the knowledge base of teaching. It would include most of the formal teacher training courses based on intellectual rather than experiential activities. Since most professional programs include both course and field experience, there are few investigations which report the effects of course work alone. The many studies which deal with the effects of different types of practice or student teaching are discussed under the behavioral component.

Formal classroom instruction which focuses on specific attitudinal change in the cognitive area, such as courses in human development and child growth, do produce favorable attitudes toward children and teaching, and a more perceptive attitude toward individual differences. But these changes are apt to be superficial and minimal unless the course work is accompanied by practical experiences.

(Gibson, 1972; Leton, 1961; Pope, 1971; and Remmers, Dodds, & Brasch, 1942.)

Another major group of studies which deal with the cognitive component are those which are designed to improve skills in subject matter instruction. These are particularly addressed to innovative curricular programs. Methods content courses, e.g., those in math or science, are

generally reported as having produced favorable attitudinal changes toward the new techniques. It is quite likely that the most significant gains will be made by the most experienced teachers. Evidently they are more capable of realizing the practical advantages inherent in the new methodology.

(Butts & Raun, 1968; Clark, 1971; DeGroote, 1972; Hunkler & Quast, 1972; Hulleman, 1972; Kardatzke, 1968; Kennedy, 1973; Liddle, 1971; Uffelman, 1972; Whipple, 1970; and, Wise, 1971.)

Behavioral Component:

By far the majority of teacher training programs focus on the inculcation of appropriate behaviors for functioning in the classroom. Much of the dissatisfaction with the traditional course+practice teaching approach stems from the fact that the requisite attitudinal changes are assumed to take place automatically, once the techniques and skills have been acquired. The student teaching experience, which is generally regarded as the most significant aspect of teacher training, thus fails in producing the desired effects.

As a matter of fact, recent studies have indicated that in some cases there is a deterioration, such that many trainees become more negative as a result of (perhaps premature) exposure to children in the classroom. These negative effects are reflected not only in a less favorable attitude to the children, but also in a damaged sense of self-worth. In general, practice teaching has the effect of making the teacher candidate more directive and controlling. Whereas during their course work students seem to share the more liberal orientations of their college professors, when they enter the public school setting they take on the more conservative and authoritarian characteristics of the supervising

teachers. It also seems to be true that practice teaching reduces behavioral extremes. For instance, two groups of trainees characterized as extremely high and extremely low on the custodial dimension, became more alike in the emphasis they placed on skill training after the student teaching assignment.

Some investigators have attempted to show that the effect of practice teaching is different for elementary and secondary teacher trainees, with the latter group becoming more conservative and controlling. But there is insufficient evidence to sustain this conclusion.

Practice teaching does not always have a negative effect. Several researchers have shown that teachers often improve in child orientation and become more democratic in their classroom practices after training. Again, it must be pointed out that what seem to be contradictory findings are really reflections of differences in the nature and emphasis used in the training program, and the charismatic effect of the supervisory personnel.

(Bills, Macagnoni, & Elliott, 1964; California Teacher Development Project, 1973; Callis, 1950; Campbell, 1967; Castek, 1970; Dell, 1972; Dutton, 1962; Glasnapp & Guenther, 1973; Gray, 1970; Grigsby, 1971; Jacobs, 1968; Khan & Weiss, 1973; Knoll, 1973; Nagel, 1959; Price, 1971; Sangren & Schmidt, 1956; Shiflett, 1972; Stone, 1970; Walberg, 1966; and, Weinstock & Teccolo, 1970.)

The interactional analysis technique for coding classroom behaviors has recently been adopted for use in teacher training. The application of the category system helps teachers focus more precisely on their own behaviors. They are then able to control and modify their teaching strategies much more precisely than are teachers who have had only the traditional teacher training.

In a series of studies using the interactional analysis technique, researchers have found that there is a greater use of questioning rather than lecturing. Students are encouraged to initiate verbal interactions, and teachers are more apt to accept and use student ideas. There is less criticism and more praise and encouragement. The positive classroom ambience created under these circumstances persists even months after the training has been terminated. And the replication of the results by many independent investigators, under a variety of conditions, seems to attest to the value of this approach.

(Amidon, 1970; Bend, 1970; Clark, 1970; Flanders, 1963; Hough & Amidon, 1964, 1965, 1967; Peck & Tucker, 1973.)

Also, placing the primary emphasis on the behavioral component, simulations provide teachers with a safe, non-threatening situation in which to adapt gradually to teaching problems. Because of this feature, it has been tried out in a number of recent experimental studies. Most of the research assumes either an additive or comparative design. That is, the simulation training is compared to other types of instruction, or it is included as an added feature to a regular training program.

An interesting property of simulation game theory is that it can be adapted to trying out a variety of role behaviors removed from the stress of the real-life situation. It also enables the members of the social system to enter into the position of the other person, and thus, hopefully produce greater understanding through the necessities engendered by the actual role behavior. One such application of simulation was concerned with administrative functions. Five students from the class assumed the role of town board and discussed options for the expenditure of money. Each person had to present a justification for the option selected.

Unfortunately, simulation training has failed to fulfill the high hopes with which it had been entered into the teacher training armamentorium. The data from a number of experiments seem to be in agreement that simulation adds nothing of significance to the teacher training experience. One clue to the basis for this negative finding comes from the study cited above. The investigators noted that not all teachers are equally successful in using simulation, and that conceptual level may be an important factor in the effective use of this technique.

(Altman & Castek, 1971; Eder, 1971; Gleason, 1971; Huber, 1972; Oswald & Broadbent, 1972; Ponder & Heath, 1972; and, Waggner, 1971.)

The role of the supervisor in effecting attitudinal change has been frequently noted. There is ample evidence to show that student teachers become more like their supervisors or cooperating teachers over the course of the practice teaching period. In those cases where the teacher training faculty is more liberal and progressive, the students may adopt a more open-minded stance. This, however, is reversed in practice teaching, since most public school supervisory personnel are more conservative than the faculty of the teacher training institution.

As a matter of fact, the type of institution attended has an important effect on the attitudes of the trainees. College faculties tend to be closer in their ideology to the public schools, whereas university faculty are more apt to have divergent educational philosophies. Hence the teacher trainees who complete training in a teachers' college are apt to be less open-minded and have lower scores on the MTAI child-centered scale.

It seems obvious that the supervisor-trainee effects would be dependent upon the supervisory style of the cooperating teacher as well

as the personality characteristics of the teacher candidate. Undoubtedly, the effective supervisor is one who provides leadership, is close to the student teacher, and uses professional expertise to facilitate personal and institutional growth. The skilled supervisor will also involve the trainees in the decision-making processes of the school. There is a good measure of face validity to the assumption that such supervisors will be more effective in producing behavioral change in the trainee. This assumption was generally supported,but there was one experiment which seemed to indicate that student teachers want supervisors who are also directive and authoritarian. In that study, the practice teachers rated the open-minded,progressive supervisors as less effective than those who were more highly structured. Evidently managerial skills and technical competence are as important as the more humanistic attributes.

One final point here: it is interesting to note that supervisory teachers report that they find their role extremely rewarding. They learn a great deal from their students, who stimulate them to keep abreast of the latest developments in education.

(Bell, 1971; Casey & McNeil, 1970; Churukian & Cryan, 1972; Cummins, 1961; Dowski, 1971; Hohman, 1972; Identifying strengths of effective teachers, 1970; Impact of student teaching programs, 1970; Jansen, 1971; Kearney & Rocchio, 1956; King, 1970; Leslie, 1969; Loadman & Mahan, 1973; Neville, 1971; Parsons, 1972; Peters, 1971; Scott & Brinkley, 1960; Soars & Soares, 1971; Wiley, 1972; Yee, 1969; and, Zabka, 1972.)

Multi-faceted Programs:

Most training programs attempt to change more than one of the components of teacher attitudes. In fact, many of the recent, most innovative teacher programs support what has been called a "total immersion"

approach. Student teachers are placed in the community, perhaps even taking up residence in a home similar to those of children in their classes. Methods courses are taught in the training school, where they are perceived as more reality-oriented.

The allocation of time in one innovative program involving a more or less total approach includes 26 hours in the schools, 30 hours in seminars, and 76 hours in large group activities. Regular workshops and field trips were also scheduled. Teaching techniques included: teaming, differentiated staffing, and small-group colloquia. Students were participants in interim planning and schedule revision. Evaluation and student conferences were also weekly activities With the proper leadership, incentives, and motivation, such programs can be extremely effective in developing more positive attitudes of middle-class trainees toward minority and poverty populations.

But a training program need not be quite so intensive to produce favorable attitudinal changes. Combinations of field experience with classroom courses have proven more effective than either one alone. Because of the general dissatisfaction with the conventional practice teaching arrangements, and to prepare teacher candidates to face the real world of the classroom with a minimum of trauma and reality shock, there has been an increasing tendency to develop new types of internship programs. A major characteristic of such programs is their emphasis on human relationship training. The goals of the training are often described as "increased sensitivity" and "self-awareness." Techniques include group interaction, sensitivity training, and sociodrama activities. These sensitizing experiences often create role strain and may cause personal distress. However, the students who complete this type of training often have more favorable attitudes toward teaching than trainees who do

not share this experience.

There are a number of teacher education programs under federal auspices which have fostered the development of new training approaches. Teacher Corps and other programs such as those sponsored by the Education Professions Development Act, have encouraged breaking away from the traditional course-oriented teacher training program. For example, a number of Teacher Education Centers have been set up to provide a more coordinated teacher preparation environment. Although there is no evidence that the students trained in these centers are more effective in the classroom, their responses to attitude surveys indicate a more positive feeling about the teaching profession.

(Bartos, 1973; Besel, 1970; Boca, 1969; Bowman, 1973; Brim, 1968; Cox, 1960; Evans, 1974; Helms, 1971; Holmes, 1968; Khanna, 1970; Mazer, 1969; Metzner, Nelson, & Sharp, 1972; Mills, 1972; Peck & Tucker, 1973; Scriven, 1972; Teague, 1972; Werking, 1971; Whipple, 1970; Wise, 1971; and, Young, 1970.)

Finally, several studies attempt to evaluate an innovative program by comparing two or more different approaches. For example, prospective teachers who have served as aides from the onset of their professional training, and those who have had more experience in the classroom, are more apt to make effective teachers. They have a greater feeling of pride in their profession, and can be expected to remain in teaching longer than those who have not had this background.

As indicated earlier, researchers who compared simulation training with either conventional training programs, or modified traditional ones (i.e., having some innovative feature such as small group seminars, counseling, etc.), have found no significant differences among the various

training models. But when a humanistic approach was compared with a participant observation and a special methods program, the outcomes favored the experimental treatment. The suggestion was therefore made that a sequential humanistic program should be implemented early in the college program of teacher candidates.

Results of comparative studies are not always clear-cut because there is often a great deal of diffusion. The Hawthorne effect also operates to improve the quality of the conventional programs. On the whole, experiments which contrast traditional procedures with a variety of innovative models report some advantage for the new approach.

(Altman & Castek, 1971; Bingman, 1973; Clothier & Lawson, 1969; Eder, 1971; Keener, 1971; Veldman, Menaker, & Newlove, 1970; Waggner, 1971; and, Wilber & Gooding, 1974.)